RECORD OF DECISION

ENVIRONMENTAL IMPACT STATEMENT

SMOKY CANYON MINE, PANELS F&G

Prepared by

U.S. Department of the Interior
Bureau of Land Management
Idaho Falls District
1405 Hollipark Drive
Idaho Falls, Idaho 83401

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INTRODUCTION

About this Document

Background

The Bureau of Land Management (BLM) received an application in April of 2003 from the J.R. Simplot Company (Simplot) to exercise development rights granted to them in federal mineral leases that they own. Simplot's application proposes expanding the existing phosphate mining operations at their Smoky Canyon Mine by constructing Panels F and Panel G. The application, in the form of a Mine and Reclamation Plan, proposes the extraction of phosphate ore from their two Federal Phosphate leases; the Manning Creek Lease (I-27512, also known as Panel F) and the Deer Creek Lease (I-01441, also known as Panel G). The Manning Creek Lease is contiguous with the south end of the existing mine and was issued January 1, 2001. The Deer Creek Lease is located approximately 1.5 miles southwest of the Manning Creek lease and was issued in 1951 and enlarged through BLM's lease modification process in 1998. Both leases are located on National Forest System (NFS) lands administered by the Caribou-Targhee National Forest.

Multiple Agency Involvement

The United States Department of the Interior (DOI) manages the mineral estate belonging to the United States. For non-energy leasable minerals like phosphate, BLM is the designated agency within the DOI that is responsible for minerals management functions on most Federal lands, including NFS lands. In the case of this proposal, the land surface, both on and off the leases, is managed by the United States Department of Agriculture, Forest Service (USFS). Regulations at 43 CFR 3590.2 (a) direct BLM to "consult with the agency having jurisdiction over the lands with respect to the surface protection and reclamation aspects". The USFS is responsible for surface management of National Forest System lands and authorizing special uses such as mine facilities, access and haul roads located on lands outside of federal mineral leases. For these reasons the BLM is the lead agency and the USFS is also the co-lead agency in review of this application and preparation of the NEPA document. The inter-disciplinary team of resource specialists was provided by the Caribou-Targhee National Forest.

After a review of the proposed Mine and Reclamation Plan for Panels F and G, the BLM and USFS determined that there was potential for significant effects to the environment. In compliance with the National Environmental Policy Act, an Environmental Impact Statement (EIS) was prepared to assess the potential impacts of the project and develop site-specific mitigation measures. The proposed mine expansion is located in a relatively pristine and sensitive area and could impact resources such as surface water, ground water, Yellowstone cutthroat trout, and USFS Inventoried Roadless Areas.

Like all phosphate mines in Southeast Idaho, waste shale overburden materials are removed during the course of mining. This overburden has a potential to release contaminants, primarily selenium, to the environment if not handled appropriately.

Because the proposed mine expansion has the potential to result in the leaching and release of contaminants from the mine waste rock into ground and surface water, the Idaho Department of Environmental Quality (IDEQ) was asked to participate in preparing the EIS as a Cooperating Agency. They have been involved in all aspects of water quality analysis in order to determine compliance with water quality requirements, such as the Idaho Ground Water Quality Rule (IDAPA 58.01.11).

One EIS with Multiple BLM and USFS Decisions

Both the USFS and BLM make separate, but connected decisions based on the same jointly-prepared EIS. BLM considers the on-lease portions of the proposed Mine and Reclamation Plan and considers changes to the boundaries of the leases, called lease modifications. BLM consults with the Forest Service prior to making those decisions. The Forest Service decision is to consider approval of the off-lease portions of the mine plan which includes the transportation routes and other facilities such as power lines and topsoil stockpiles. These are permitted with a Special Use Authorization(s). The BLM decision cannot be implemented without a decision by the USFS to authorize access to the lease. The USFS decision is not necessary without the BLM authorization to develop the mineral leases.

Setting

The J.R. Simplot Company currently operates the Smoky Canyon Mine, located in Caribou County, Idaho. It is located approximately 10 air miles west of Afton, Wyoming. At the existing mine Simplot recovers phosphate ore, where it is reduced in a mill to a slurry and transported via pipeline to their processing plant in Pocatello, Idaho, where it is further processed into fertilizer products.

Existing facilities at the Smoky Canyon Mine include an access road, office/shop complex, mill and tailings ponds, ore stockpiles, open pits, backfilled pits, external overburden disposal sites, power lines, tailings pipelines, the slurry pipeline, and ancillary facilities such as sediment control structures, storage yards, equipment fueling areas and parking areas.

Simplot's Proposed Action

Simplot's proposed Mine and Reclamation Plan, including environmental protection measures, is fully described in Chapter 2 of the Final EIS (FEIS). The Proposed Action consists of expanding the current surface mining operations to develop two new mine panels (Panel F and Panel G) including the construction of topsoil stockpiles, mine equipment parking and service areas, haul/access roads, a 25kV power line, permanent external overburden storage areas, and sediment control structures. The proposed mining would occur on existing federal phosphate leases I-27512 (Manning Creek, a.k.a. Panel F) and I-01441 (Deer Creek, a.k.a. Panel G) held by Simplot. The Manning Creek Lease is contiguous with the south end of the existing mine and the Deer Creek Lease is located approximately 1.5 miles southwest of the Manning Creek lease, across the Deer Creek drainage.

Access to Panels F and G would be through the existing mine. The mining process would employ an open-pit mining method that would be similar to methods employed at the existing mine. See **Chapter 2** of the FEIS. Phosphate ore would be hauled in trucks on the private haul/access roads from the mine panels north to the existing Smoky Canyon Mine mill.

The existing Smoky Canyon Mine mill, maintenance, and administrative facilities would continue to be used in the proposed expansion. New structures at Panels F and G would include equipment ready lines, electrical substations, warehouse and storage areas, lunch rooms, repair shops, blasting supply storage, restrooms, and fuel storage and dispensing facilities. Phosphate ore would be beneficiated at the existing mill facility using the existing permitted industrial well, tailings pipeline, and tailings ponds. No changes will be required to the existing permits for the tailings ponds. The tailings ponds will be operated and closed according to previously approved plans.

Modifications to Panel F and G Leases

Simplot has also proposed to modify or expand the existing Panel F lease (I-27512) to the north and south, to accommodate the mining of additional phosphate ore that has been delineated on contiguous lands currently not under lease. The North Lease Modification would allow for recovery of ore that would be encountered directly in the proposed haul/access road alignment from the existing mine to Panel F. If this ore is not recovered as part of the Panel F operation, it will not be recoverable as a separate, future mining operation. The South Lease Modification would allow for recovery of phosphate ore that extends from the southern boundary of the Panel F lease to approximately the southerly limit of the ore outcrop. If this ore is not recovered as part of the Panel F operation, it too will not be recoverable as a separate, future mining operation.

In Simplot's proposed plan for Panel G, the East Overburden Fill is too large to fit within the existing Deer Creek lease (I-01441) and is proposed to extend off-lease, onto USFS managed lands. This aspect of the proposed plan would require Simplot to obtain the additional land use authorizations to cover the approximately 18 acres of overburden fill extending off lease.

14-16 Year Mine-Life

At full production rate, the mine life of Panel F of Simplot's proposed action is about 7 years, including the proposed modifications. Panel G also has an estimated mine life of about 7 years at full production. While reclamation of pit disturbance would take place concurrent with mining, it would take approximately 2 years to complete reclamation of all roads and other disturbance no longer needed. Thus, as proposed, the entire project would have a combined life of about 16 years.

Construct Panel F Haul/Access and Panel G Haul/Access Roads

A 2.6-mile long road would be constructed from the south end of the existing mine to the north end of Panel F. It would entail about 66.5 acres of disturbance. This road would be used to access Panel F to transport waste to backfill Panel E and ore to the mill. Detailed

road construction methods and environmental protection measures are described in **Sections 2.4, 2.5, and Appendix 2D** of the FEIS. The road would be constructed of material from road cuts and low-selenium overburden. A road fill crossing over South Fork of Sage Creek would be constructed. The 230-foot long culvert installed in the crossing would be designed to pass fish in accordance with USFS requirements. The Panel F Haul/Access Road is a USFS consideration.

Initially, the primary Panel F Haul/Access road would be constructed to access the upper portions of Pit 1 [in Panel F] and subsequently all of Pits 2, 3, and 4. As mining proceeds and Pit 1 deepens, additional temporary access roads would be constructed further to the north and down slope. Each temporary access road would allow access to successively lower portions of the deposit. As each temporary road is constructed the previous higher road would be obliterated. See **Figure 2.4-1** in the FEIS. The series of temporary roads would be needed to mine Pit 1 to its maximum depth for a time-frame of about 1 year.

Access to Panel G would be provided by construction of the 7.8 mile long Panel G West Haul/Access road. This road would entail about 217.3 acres of disturbance. It would have similar construction designs, materials and environmental protection methods as the Panel F road. The road would cross perennial portions of Deer Creek and South Fork of Deer Creek. Culverts would be 280 and 260 feet long respectively and would be designed to pass fish. The Panel G West Haul/Access Road is a USFS consideration.

<u>Roads closed for safety</u>
Haul/Access roads would be closed to public vehicle access for safety concerns. Where haul roads cross existing forest system roads or trails, public crossings would be constructed with warning signs to alert the public of the haul truck traffic and direct them not to enter the haul road. Haul trucks would have the right of way at these crossings.

<u>Power Line</u>
Electric power would be provided by a proposed 6 mile-long, 25kV power line extending from the south end of Panel E to Panel F then to Panel G. It would cross the South Fork of Sage Creek, North Fork of Deer Creek and Deer Creek. This could create up to 28 acres of disturbance as proposed.

<u>Water Well at Panel G</u>
Water for dust control in Panel F would come from the existing water source at the Smoky Canyon Mine mill site. Because of the longer distance to Panel G, a water supply well with an average pumping rate of 100 gpm would be installed on the lease to supply water necessary for mining operations.

<u>Panel F and Panel G Pit Development</u>
Generally, Simplot proposes to mine the two Panels from north to south. Panel F would be mined as a series of four smaller pits, including the lease modification areas. Initially, the overburden from Panel F would be transported back to the existing mine and used to backfill the existing Pit E-0. The remainder of the Panel F overburden would be placed

in the Panel F pit as backfill or placed in the 38-acre Panel F External Overburden Fill. This fill would contain seleniferous overburden.

Panel G would be mined as one large pit. Overburden would be mostly placed as backfill back into Panel G or placed in one of two external overburden fills. As proposed by Simplot, the Panel G East Overburden fill would cover approximately 64 acres and contain seleniferous material. The Panel G South External Overburden fill would cover 74 acres and contain only chert.

Disturbed lands directly resulting from Simplot's Proposed Action would total 1,340 acres including 284 acres of roads, 763 acres of pits, 176 acres of external overburden fills and 177 acres of other disturbance (settling ponds, ditches, topsoil piles, and power line).

Proposed Reclamation

Approximately 89 percent of the overburden from both panels combined would be placed back into the mined-out pits of Panels E, F, and G as backfill and the rest would be placed external to the pits. Reclamation would take place concurrent with mining. Under Simplot's proposed plan, when pit backfills, haul roads, and external overburden areas are no longer needed for mining, the potentially seleniferous backfill and external overburden would be covered with at least 4 feet of low-selenium chert material and 1-2 feet of topsoil prior to revegetation. Other areas would be covered with 1-2 feet of topsoil prior to revegetation.

Other environmental protection measures include, but are not limited to protection of vertebrate fossils, reducing fugitive dust, protection of soil resources, controlling noxious weeds, control of run-on water and collection of run-off water, removal of low permeability material under overburden storage to reduce potential for contaminated seeps, and designing final reclamation of overburden to shed run-off. They are more fully described in **Section 2.5** of the FEIS.

CERCLA Activities on Existing Mine as Related to this Project

In 1984, Simplot began extracting phosphate ore from deposits located on federal land at its Smoky Canyon Mine. Smoky Canyon mining and milling operations were authorized in a Record of Decision issued in 1982, based on the Smoky Canyon Phosphate Mine Final Environmental Impact Statement. The original Mine and Reclamation Plan proposed mining and reclamation activities for five adjacent pits referred to as Panels A, B, C, D and E. As mining progressed into each mine panel, mine and reclamation operations were reviewed, and the environmental effects were assessed with an Environmental Assessment, each tiered to the 1982 EIS. These assessments are further described in **Section 2.2.2** of the FEIS.

In late 1996, livestock deaths occurred near the Maybe Canyon Phosphate Mine in southeast Idaho. It was found that waste rock stored in a "cross valley fill" was discharging selenium down-gradient into surface water and ground water, resulting in

acute selenosis in some species of livestock. As described in **Section 2.3.12** of the FEIS, several actions were taken by the agencies to address the selenium situation in southeast Idaho. The ensuing investigations found that the Pole Canyon overburden disposal area at the Smoky Canyon Mine was similarly releasing selenium.

In light of the Pole Canyon monitoring data, Simplot, the USFS, EPA, and Idaho Department of Environmental Quality signed an Administrative Order on Consent (AOC) under the Comprehensive Environmental Compensation Liability Act (CERCLA) to conduct a formal Site Investigation at Smoky Canyon Mine, to be followed by an Engineering Evaluation/Cost Analysis (EE/CA). Terms of this enforceable order provide for the characterization of a release or threatened release of selenium and other hazardous substances from historic and inactive portions of the mine. CERCLA was chosen as the appropriate authority to address contaminant releases from the Smoky Canyon Mine because it was suspected releases were occurring from historic and inactive portions of the mine.

Mining currently takes place in Panel B. In 2000, prior to approving mining in Panels B and C, BLM began preparing a Supplemental Environmental Impact Statement that included a detailed evaluation of waste rock disposal and the development of site-specific mine practices and mitigation measures to address the release of selenium and other contaminants from mine overburden. In 2002, the BLM issued a Record of Decision approving the Mine and Reclamation Plan for Simplot's operations in Panels B and C. Mining operations are complete in Panels A, C, D, and E. Reclamation at Panels A, C, and E continues to progress as mine and reclamation activities are undertaken.

In 2003, Simplot proposed to expand the existing Smoky Canyon Mine by constructing Panels F and G. The environmental impact analysis in the FEIS conducted pursuant to NEPA has taken place at the same time as the CERCLA activities on the existing mine. The two processes are not exclusive of one another and the conclusions reached to date in each process are generally consistent. Data was and continues to be shared between NEPA projects and CERCLA projects to provide up-to-date analysis from both regulatory processes.

The CERCLA Site Investigation on the existing mine indicated elevated selenium in some reclamation vegetation and exceedences of selenium standards in surface water and groundwater. In 2006, the USFS selected a set of removal response actions, including the diversion of Pole Canyon Creek around mine waste rock in the Pole Canyon fill. Problems were encountered while constructing the water diversion during the winter and early spring of 2007, however, corrective actions were taken and the diversion was completed later in the year. Since October 2007, water from upper Pole Creek no longer contacts seleniferous waste rock in the overburden fill and meets State and Federal water quality standards above and below the Pole Canyon fill.

The USFS, in collaboration with the Selenium Interagency/Tribal partners, determined that contaminant releases from the Smoky Canyon Mine were better addressed as CERCLA remedial response actions rather than CERCLA non-time critical response

actions. An updated AOC is being negotiated with Simplot to provide for a Remedial Investigation/ Feasibility Study to further identify and characterize releases and treatment alternatives over the remainder of the Smoky Canyon Mine site.

As analysis in the FEIS was nearing completion, monitoring data from the existing mine collected in late 2006, and subsequently in 2007, indicated an increase in selenium concentrations at the South Fork of Sage Creek Springs, adjacent to Panel E at the existing Smoky Canyon Mine. The analysis in the FEIS was updated to include and consider this data.

After the analysis in the FEIS for Panels F and G was completed, to in part address the selenium increase at South Fork of Sage Creek, the BLM has approved a more stringent reclamation plan at Panel E than was described and analyzed in the FEIS. The revised reclamation plan is expected to reduce water quality impacts from Panel E beyond what is described in the Panel F & G FEIS. In addition, future CERCLA investigations and remedial alternatives developed for the site may produce additional remedial actions for Panels A, B, C, D and E of the Smoky Canyon Mine which have not been included in the analysis in the FEIS for Panels F & G.

Monitoring and compiling of relevant data at the Smoky Canyon mine continues and will continue in the future through the existing mine administration requirements, the monitoring requirements of this decision, and the CERCLA requirements. The current impacts at Smoky Canyon Mine, including the recent impacts documented in monitoring of South Fork of Sage Creek Springs, have been fully analyzed and considered in the FEIS with as up-to-date information as possible.

Simplot's Mine and Reclamation Plan submitted for the expansion into Panels F and G employs updated approaches to handling and storing the waste rock that contains contaminants. Through the NEPA process, issues related to leaching of contaminants were clearly identified so that additional mitigation measures and mining and transportation alternatives could be developed. Remediation of the existing contamination at the mine site is a chief concern of the BLM and USFS. As mitigated in this decision, impacts from Panels F and G caused by leaching are predicted to comply with all applicable Federal and State water quality standards. Simplot asserts that its proposed mitigation measures will avoid impacts that would require any future CERCLA investigations or remedial actions for Panels F and G.

Purpose and Need for Action

Simplot is currently mining the final permitted phase of operations at the Smoky Canyon Mine. As these reserves are depleted, Simplot needs additional permitted reserves in order to continue operations at this site.

The purpose and need of Simplot's proposed action is to allow Simplot to continue the recovery of phosphate ore from the Smoky Canyon Mine. Ore would be beneficiated at

the existing mill and tailings facilities and transported to the Don Plant in Pocatello, Idaho, for processing into fertilizer products.

DECISION

Introduction

The Agency Preferred Alternative, identified in **Section 2.10.2** of the FEIS, is a combination of certain alternative components. The alternatives selected in this Record of Decision are similar to those indicated in the "Preferred Alternative" section of the FEIS.

As part of the decision making process the BLM has considered: comments and responses generated during scoping; the proponent's rights to recover leased mineral resources; anticipated environmental and socioeconomic consequences discussed in the EIS; comments received following the release of the Draft EIS (DEIS) and FEIS; other unsolicited comments; recommendation from the CTNF Supervisor; and applicable laws, regulations, and policies.

In order to provide the BLM and USFS decision makers with flexibility in selecting actions out of the many alternatives, the alternatives in the FEIS were analyzed individually. Some of the mining alternatives were broken down into their components, which were each analyzed separately. For example, potential impacts from mining the north and south lease modifications were analyzed separately, as were impacts from mining Panel F and Panel G. This allows consideration of various mining actions (such as mining one panel and not the other) along with any combination of the multiple transportation alternatives. The BLM has considered approval of an entire mine plan for both Panels F and G as well as a partial approval of just Panel F, and a phased approval of Panel F followed by a later approval of Panel G.

Several groups have suggested that the BLM phase this decision by only approving Panel F at this time. This would delay the approval of Panel G until some time in the future when post-implementation monitoring data can be collected regarding the success of the Panel F mine plan, reclamation at Panel E, and the CERCLA Pole Canyon diversion. This decision record is based on state-of-the-art and thorough analysis in the FEIS. Analysis indicates that these actions successfully avoid detrimental impacts to the environment. The decision considers the BLM regulations and the ability of BLM to order mining to cease if there is sufficient cause based on data collected after implementation (in accordance with 43 CFR 3598.4). If monitoring data show that there is sufficient cause, BLM will halt mining in accordance with 43 CFR 3598.4 until the necessary changes are made. The monitoring program approved in this decision is described in Appendix II of this decision, and is designed to give the BLM, Forest Service, and IDEQ the ability, if necessary, to adaptively manage the engineered cover system or other environmental protection measures prior to implementation at Panel G. A delayed approval of Panel G would impede the ability of Simplot to blend the lower-

grade ore from the bottom of Panel F with the higher-grade ore from the top of Panel G. BLM has considered a phased decision, but has determined that the mechanisms are in place to provide Simplot with adequate continuity of mining while still allowing BLM to assess the adequacy of the mine plan prior to Simplot's mining of Panel G.

Regulations at 43 CFR 3590.0-1 and 3594.1 direct BLM to encourage the maximum recovery of the mineral resource, while ensuring the protection of the environment and other natural resources. In considering alternatives and mitigation BLM considers what is legal, what is environmentally preferable, and what maximizes ore recovery. Requiring alternatives and mitigation beyond what is proposed by the mining company typically comes at some additional cost to the mining company. Those costs may be offset by selectively mining only the most profitable portions of a deposit and abandoning those resources that are less profitable. In order to maintain a steady flow of ore, the mining company is likely to then move onto an undeveloped lease it holds, thereby cycling the disturbance and impacts more quickly into those undeveloped areas than it otherwise would. Maximizing recovery promotes the wise use of resources. BLM must weigh what alternatives and mitigation may be necessary to maintain compliance with applicable standards; what alternatives and mitigation are needed for adequate environmental protection; and what alternatives and mitigation may seem appropriate but could lead to under-utilization of the mineral resource.

No Supplemental Analysis Required

The BLM has received comments from the public suggesting that, because changes were made between the Draft EIS and the Final EIS, supplemental NEPA analysis is required. As part of the public comment process, the BLM received comments containing additional data to include in the EIS. The data was evaluated and where appropriate, this data was included in the FEIS. In addition, as monitoring at the existing mine continued, some data sets such as surface water were also updated so that analysis would consider the most current data available. Where possible, the DEIS indicated the potential for change, in particular the cover design and 303(d) listings. **Section 1.7** of the FEIS identifies and further considers the changes between the Draft and Final. Even with the inclusion of updated data in the FEIS, the basic conclusions drawn in the DEIS did not generally change. Therefore BLM has determined in consultation with the USFS that no supplemental NEPA analysis is required.

In addition to a review of the FEIS itself, prior to drafting this decision, all responses to the FEIS were reviewed and considered to determine if they contained new and significant information that could trigger the need for supplemental analysis. BLM has determined that the responses did not contain information that triggers the need for supplemental analysis.

New Methods for Environmental Protection

The analysis in the FEIS indicates that the environmental protection measures included in the Panels F and G mine plan will be effective in reducing water quality impacts. These measures were developed based on information that has been acquired by the agencies and the mining companies involved through both the CERCLA and NEPA processes

regarding the pathways for leaching and releasing contaminants from other phosphate mine sites.

Unlike past mine plans, Simplot's proposed concurrent reclamation will greatly reduce the environmental exposure of waste rock containing contaminants. Concurrent reclamation and construction of diversion channels will prevent meteoric water from flowing onto the mine site. This will limit the volume of water available to contact and infiltrate into the overburden. Sediment control features which capture run-off from the site will be designed to promote evaporation rather than infiltration and will not be located on seleniferous overburden. Reclamation vegetation will be separated from seleniferous overburden through a sufficiently thick cover. These and other environmental protection measures are more fully described in **Section 2.5** of the FEIS. The FEIS indicates that when these measures are combined with the store and release cover system, Alternative D, this mine plan can be implemented without violations of applicable water quality standards and will not create the same type of contaminant problems currently documented at other phosphate mine sites.

The Decision

Approval of Mining both Panel F and Panel G

BLM approves the mining of both Panels F and Panel G according to the Mine and Reclamation Plan described as the Proposed Action (**Section 2.4**) in the FEIS, including the environmental protection measures described in **Section 2.5, Appendix 2C, and Appendix 2D**, and further mitigated by the selection of the mining alternatives described below. However, this decision does not approve the off-lease storage of overburden at Panel G as originally proposed by Simplot.

This decision includes the approval of the Lease Modification application for lease I-27512 (Panel F) only. The two-part, 520-acre lease modification is depicted in the FEIS in **Figure 2.4-1**. The parts are described as the North Lease Modification area and South Lease Modification area in the FEIS. Both the parcels meet the criteria for a lease modification, detailed in 43 CFR 3510.15. Approval of this lease modification will be subject to a conditional stipulation for the South Lease Modification area that prevents the lessee from undertaking any mining activities, road construction, and/or surface disturbing activities on the lands until a determination is made regarding whether the Roadless Area Conservation Rule (RACR) applies to the proposed activities, and whether the activities would be allowed or must be modified. The implementation of this condition is further discussed in the section of this decision record entitled "Compliance with the Roadless Area Conservation Rule".

Following the release of the FEIS, the USFS recommended to BLM (USDA, CTNF Recommendation letter April 29, 2008) that Simplot's topsoil stockpile, proposed to be located on the east side of Panel F, should be adjusted such that it remains entirely within the lease (I-27512) boundary. **Figure 2.41** of the FEIS depicts Simplot's proposed location in which the approximate 40-acre stock pile is about one-half on the lease and

one-half off of the lease. BLM requested a revised topsoil stockpile plan from Simplot in which all disturbance remains on lease. This decision record approves the relocated, on-lease design as shown on Figure 1 of this decision.

The impacts of the proposed stockpile were analyzed in the FEIS. The minor relocation does not bear heavily on the impacts of the stockpile. Simplot will employ the same environmental protection measures to retain soil characteristics and prevent erosion as described in the proposed plan. The relocated stockpile will be of similar size and contain the same volume of topsoil. The shape of the stockpile will be adjusted such that approximately one-half of the topsoil will be located further north on the same ridge and remain on lease. The topographic location of one-half of the topsoil stockpile, about 20 acres, will change. Impacts to vegetation and soil resources disturbed will be very similar therefore impacts to wildlife will be very similar. The visual impacts of the stockpile would also be similar. There will be no discernable change in: Air quality impacts, noise impacts, water quality impacts, wetlands impacts, fisheries impacts, grazing impacts, recreation impacts, cultural resource impacts, Tribal issues, environmental justice, or economics. The entire lease was surveyed for cultural resources. There will be no conflicts with cultural resources by moving the topsoil back on lease. There will be less off-lease disturbance in the Sage Creek Inventoried Roadless Area.

Certain portions of the haul/access roads will to be built across some areas of natural slopes that are steeper than 33 percent (3h:1v). **Section 2.4** the FEIS describes that in these instances the roads would be reclaimed back to a 33 percent slope, but not steeper. The roads will be obliterated and will no longer function as a road, yet some visual remnant of the scarp will remain. Basically, this means that for road disturbances across natural slopes, less than 33 percent, there will be obliteration through full recontouring and reclamation, and for original slopes steeper than 33 percent, roads will be obliterated but the entire cut will not be fully recontoured. The areas of the haul/access roads that will not be fully recontoured are shown on **Figure 2.4-4** in the FEIS.

The USFS has recommended (USDA, CTNF Recommendation letter April 29, 2008) to the BLM that where these instances occur on lease, the roads are reclaimed to a slightly steeper, 2h:1v slope. This will decrease the overall number of acres left unreclaimed in Inventoried Roadless Areas and will render the reclamation less traversable my motorized vehicles. Some on-lease portions of the Panel F Haul/Access Road will be affected by this change in reclamation. These portions of the access road will be revegetated and all necessary erosion control measures necessary will be employed by Simplot as described in the FEIS. This decision record approves the change to steeper road reclamation in areas on lease where roads are constructed across original slopes steeper than 33 percent.

<u>Alternative D</u>

Analysis in the FEIS indicates that neither Simplot's Proposed Action nor Mining Alternatives A, B, or C would be sufficiently protective of water quality without additional mitigation. Therefore, BLM also selects Alternative D, which entails the construction of an engineered store and release cover system and is described in **Section**

2.6.1 of the FEIS. This alternative is the most protective of ground and surface water of all the Mining Alternatives analyzed in the FEIS. The engineered cover system is designed to limit infiltration of water into seleniferous waste material, thus decreasing the leaching of selenium and other pollutants to a level well within groundwater or surface water standards. Analysis (**Table 4.3-22** and **Table 4.3-23** in the FEIS) indicates that, while concentrations of selenium will vary by location and time of year, with the cover system in place, peak selenium concentrations in receiving streams below the proposed mining operations will generally be about one-half of the most stringent State and Federal regulatory limit for surface water, which is the standard used for the protection of cold water biota and aquatic life.

By selecting the mining alternative that is in compliance with drinking water standards and the cold water biota standard, BLM has selected the mining alternative that is most protective of human health and fisheries. As the cover is over six feet thick, it also protects against erosion of seleniferous material and protects against uptake of selenium by the roots of reclamation vegetation. This in turn also makes this alternative protective of vegetation, wildlife and domestic animals that would become re-established on the reclaimed mining disturbances following cessation of mining operations.

Alternative E

BLM also selects Alternative E in which electric power for the mining operations will be provided with a 25kV, single-pole structure, power line extending southward along the selected haul/access roads from the existing power line in Panel E. The power line will be constructed within the footprint of the USFS selected haul/access roads. As discussed below, the FEIS indicates USFS selection of the proposed Panel F Haul/Access road and the proposed Panel G West Haul/Access road.

Selection of this alternative reduces surface disturbance by eliminating the need for a separate disturbed area to construct and maintain the power line. There will be slightly less disturbance in the Deer Creek water shed. Because there will be slightly less surface disturbance there will be slightly less impacts to soil, vegetation, wildlife, fisheries, livestock grazing, IRA's, and visual resources.

BLM and USFS have selected this alternative to minimize impacts to the Deer Creek watershed, even though it comes at some additional cost to Simplot.

No Panel G Lease Modification

As proposed by Simplot, the Panel G East External Overburden Fill would be too large to fit within the existing Deer Creek Lease and would extend off the existing lease onto USFS land. To use this east overburden fill, Simplot would need appropriate land use authorizations to cover the approximately 18 acres of overburden fill extending off lease, as shown on **Figure 2.4-1** in the FEIS.

BLM will not approve or issue a lease modification for the area of the overburden fill off-lease at this time, since the area does not meet the criteria for a lease modification (43 CFR 3510). BLM cannot issue a Phosphate Use Permit on Forest System lands. The

USFS will not issue a Special Use Authorization for seleniferous overburden to be placed off-lease, at this time. It does not pass the screening criteria for Special Use Authorizations. However, as part of Simplot's Proposed Action, the impacts of the off-lease overburden storage were analyzed in the FEIS and if regulations change in the future, a separate decision could be considered at that time by both agencies. Otherwise, Simplot will have to submit a revised dump design for BLM and USFS consideration prior to construction of Panel G, as described in the Mitigation portion (Appendix II) of this record.

Figure 1, attached at the end of this decision, depicts the BLM-approved disturbances authorized by this decision.

BLM Decisions Compatible with USFS Decisions

BLM has collaborated with the USFS while preparing the EIS and while considering selection of alternatives. The USFS decisions related to off-lease transportation and facilities support the BLM alternative selections listed above.

As part of the Agency Preferred Alternative in the FEIS, the USFS has indicated their selection of the Proposed Action, Panel F Haul/Access road. This selection is consistent with this BLM decision, BLM regulations, and management goals. This alternative allows for access to and recovery of the entire economic ore body on the Panel F lease (I-27512). While it has more acres of disturbance than the alternative alignment (described as Transportation Alternative 1 in **Section 2.6** of the FEIS), the Proposed Action, Panel F Haul/Access road allows for a deeper pit in the northern part of Panel F and more recovery of ore reserves on lease. This approach supports BLM's direction to maximize recovery. The approved Panel F Haul/Access road is designed to enter the ore deposit at the lowest elevation possible. Entering the deposit from the alternative route at a higher elevation would preclude extraction of the deeper portions of the ore body. BLM regulations (43 CFR 3594.1) state that mining operations will be conducted in a manner to yield the ultimate maximum recovery of mineral deposits consistent with the protection of other natural resources and the environment. The alternative alignment does not allow full access to the deeper portions of the ore body. Analysis in the FEIS indicates that this would decrease recovery of phosphate in Panel F by about 6 percent (**Section 4.1.1.3** of the FEIS).

The Agency Preferred Alternative in the FEIS also indicates the Forest Service selection of the Proposed Action, Panel G West Haul/Access road in the USFS Record of Decision. This selection is also consistent with BLM regulations and management goals. Compared to the Transportation Alternatives on the east side of the mine (Transportation Alternatives 2 and 3) it does not have a direct effect on private property and has little or no anticipated noise and visual impacts to the property owners in Crow Creek Valley. Of the transportation alternatives analyzed, it disturbs the least amount of intermittent stream channel, has the fewest culverts in intermittent channels, disturbs the fewest acres sagebrush habitat, and second fewest acres of aspen habitat. These and other impacts are described in **Chapter 4** of the FEIS and are summarized in **Table 2.9-2** in the FEIS.

Figure 2, attached at the end of this decision depicts the disturbances authorized by BLM combined with those authorized by the Forest Service decisions.

Decision Authority

Phosphate is a leasable mineral and is regulated by the Mineral Leasing Act of 1920, as amended. Phosphate leasing regulations are codified in 43 CFR 3500. BLM is the federal agency delegated to manage the federal mineral estate under this Act. On public lands where the surface is administered by another federal agency, BLM will issue a permit or lease only after consulting with that agency. In this case, USFS manages the surface of the lands under lease and those lands off-lease that are affected by this decision.

PRINCIPLE CONSIDERATIONS FOR THE DECISION

Compliance with Water Quality Standards

Phosphate mining in Southeast Idaho has had a history of water quality problems that have caused impacts to various aquatic resources including fisheries. Simplot's proposal to conduct mining in the Deer Creek watershed has caused a great deal of concern among the agencies and the public. During the assessment and analysis of Simplot's proposal, the protection of water quality has been of the utmost importance. The Deer Creek watershed is relatively pristine and is a popular area for recreation. BLM, USFS, and IDEQ have expended a great deal of time and effort in conducting state-of-the-art analysis of water quality impacts in the FEIS. Protection of the ground water and surface water resources is one of the primary concerns of the agencies. BLM concludes that the assessment of potential water quality impacts due to the proposed mining operations has been conservative and is reflective of the high value the agencies place on the resources of the project area.

Comments received from different individuals and groups on the Draft EIS suggested that the agency analysis both understated expected impacts to water quality and overstated them. The purpose of the laboratory and modeling efforts, summarized in **Section 4.3** of the FEIS, is to determine whether there are impacts from the project on water quality, compare predicted impacts between alternatives, and to compare predicted impacts to applicable regulatory standards. Standards established by the Clean Water Act and the Idaho Ground Water Quality Rule were considered to be sufficiently protective of the environment and were used in the EIS. However, some groups and entities commented that mine impacts should not be allowed to exceed lower thresholds proposed by individual researchers but not reflected in legally enforceable standards. The FEIS analysis considered input from comments on the DEIS and indicates that water quality impacts will be much lower than the regulatory thresholds. The computer models selected for use in the FEIS analysis are appropriate for this use and are anticipated to provide the agencies with reasonable foreseeable predictions of future impacts.

As discussed in the "Decision" section of this record and in **Sections 1.7**, **4.3.1, and 7.3.6** of the FEIS, the agencies made some changes with respect to water quality analysis between the DEIS and FEIS. Since Smoky Canyon Mine is being actively monitored, the existing water quality data was updated to include the most current monitoring results. In addition, new information was received in the form of public comments on the DEIS. Some of that information pertained to selenium attenuation in the groundwater portion of the analysis. The new empirical data was critically reviewed and documented in the project record. It was determined that the new empirical evidence provided sufficient information to adopt a selenium attenuation factor in the groundwater model. It was also determined that including a selenium attenuation factor would not be in conflict with the project record or DEIS. For purposes of comparison and in response to comments on the DEIS, the relevant tables in the FEIS present the predicted impacts using a range of selenium attenuation; from no selenium attenuation up to 35 percent.

Groundwater

In response to public and agency concerns over the protection of groundwater, Mining Alternative D, construction of an engineered store and release cover system to cap external fills and backfilled pits, was developed. It is designed to limit the amount of snowmelt and rain water that can percolate through seleniferous waste rock stored in backfill or external fills. By limiting the amount of water passing through the waste rock, the load of selenium and other chemicals reaching the groundwater and eventually reaching the surface water is decreased. The cover system will be over six feet thick and will be constructed to store water during wet periods, somewhat like a sponge, and then release it back to the atmosphere through evaporation and vegetative transpiration. The design is described in more detail in **Section 2.6** in the FEIS and is displayed on **Figure 2.6-5** of the FEIS.

With the Alternative D cover system in place, the analysis predicts compliance with applicable groundwater standards, including selenium, in the main Wells Formation aquifer. State ground water regulations do not allow selenium concentrations in groundwater to be 0.050 mg/L or greater. **Tables 4.3-15** and **Table 4.3-16** show that, at the lease boundaries and further down gradient where the groundwater discharges to surface water, the concentrations are predicted to be well below this standard. There are no locations in the Wells Formation regional aquifer adjacent to or down gradient of the mine that are predicted by the model to exceed the groundwater standard.

Surface Water

Because of the cover system and other mitigation employed to protect surface water, the agencies do not expect the mine will release selenium or other leached chemicals directly into surface water. However, analysis in the FEIS indicates that the groundwater flowing under the area of the mine panels does eventually discharge to streams and springs where it becomes surface water or mixes with other surface water.

Some existing portions of Smoky Canyon Mine are currently contributing selenium to Hoopes Springs and South Fork of Sage Creek Springs. At this time, both of these springs exceed the cold water biota criteria (the surface water standard) for selenium

(0.005 mg/L). Thus, parts of Sage Creek and South Fork of Sage Creek downstream of these springs also have selenium concentrations which exceed the cold water biota standard. Smoky Canyon Mine is currently being investigated and remediated through the CERCLA process. The FEIS indicates that by utilizing Alternative D, water quality impacts from Panels F and G will be lessened. Impacts to water quality in downgradient streams from Panels F & G will gradually increase to a peak over 50 to 100 years and then decrease. Depending on location, the peak impacts in South Fork Sage Creek will be about half of the Clean Water Act cold water biota standard and will take place about 50 to 100 years after reclamation (**Table 4.3-14** in the FEIS). If CERCLA remediation of impacts from the existing Smoky Canyon Mine were not to take place or are not successful, these impacts will exacerbate the current exceedences. However, remediation for the existing contamination is underway and the first actions were implemented in 2007. Remedial actions intended to address the existing selenium contamination issues are designed to lower selenium concentrations in Hoopes Spring and South Fork Sage Creek Springs well before the peak water quality impacts from Panels F & G arrive at South Fork Sage Creek Springs.

As described in **Appendix 2A** of the FEIS, the agencies overseeing application of CERCLA to the Smoky Canyon Mine have implemented the first of likely several remedial actions. As future foreseeable actions, the cumulative effects analysis in the FEIS includes the potential effectiveness of the Pole Canyon diversion and reclamation at Panel E. Both of these actions have been implemented and BLM fully expects that they will have positive effects on water quality at the springs which feed South Fork of Sage Creek. When the estimated effectiveness of these two actions are considered, the selenium load from the existing mine is decreased. With the data available at the time of the analysis, the FEIS provides a reasonable assessment of their potential effectiveness. When combined with the mitigated impacts from Panels F and G; Sage Creek, South Fork of Sage Creek and Crow Creek are predicted to be in compliance with the selenium surface water standard at the time peak impacts are predicted. The analysis in the FEIS does not rely on any other potential remedial actions that could be authorized through mine administration or CERCLA; only the reclamation of Panel E and the Pole Canyon diversion.

Since the analysis in the EIS was completed, the BLM has approved a more stringent reclamation plan at Panel E than was analyzed in the FEIS. It is expected to reduce water quality impacts at South Fork Sage Creek Springs from Panel E beyond what is described in the FEIS. In addition, the CERCLA investigation may also require additional remedial actions at the existing Smoky Canyon Mine which have not been included in the analysis in the FEIS.

<u>No Human Health Impacts Predicted</u>

The Clean Water Act and the Idaho Ground Water Quality Rule set standards for selenium in drinking water which are protective of human health. With the measures proposed to mitigate the leaching of chemical contaminants from waste rock, it is anticipated that the project will not pose any human health concerns related to drinking affected ground water or surface water. Groundwater, both near the mine disturbance

and at discharge points, will be well below applicable drinking water standards, including selenium. Surface water is predicted to be below the surface water standard, which is ten times lower than the drinking water standard.

Currently, there is no selenium risk to health from consumption of fish in the study area streams. With the environmental protection measures contained within this decision, it is not expected that contaminant concentrations would bioaccumulate to a degree that human health impacts would occur.

Engineered Cover System

Groundwater modeling conducted for the FEIS identified infiltration of precipitation and leaching as the primary pathway of contaminant release from backfilled pit areas and external overburden fills. In the DEIS, Alternative D identified the necessary reduction of infiltration that would just meet the applicable surface water requirements at South Fork Sage Creek Springs and other locations. A conceptual design was proposed in Alternative D that could potentially achieve the required reduction. To meet surface water standards in springs and seeps adjacent to the proposed mine, groundwater modeling conducted for the DEIS indicated that long-term percolation through the overburden fills should be reduced to about 1.2 inch per year or less from an estimated 2.8 to 3 inches per year that would occur from Simplot's proposed reclamation plan. Therefore, an engineered system to reduce percolation was determined necessary.

After additional geochemical and engineering studies, Simplot proposed a "Store and Release" cover system design. It could be applied over all areas of seleniferous overburden after final grading, required less chert volume, and had a more attainable and sustainable permeability standard for the clay-layer component. Although used for similar purposes in other areas, this type of cover has not been constructed at a phosphate mine in Southeast Idaho and there was concern that given the high elevation of the site, significant precipitation, and short growing season, that this type of cover may not be able to provide the necessary reductions in infiltration. The Forest Service, BLM, and IDEQ assembled a technical review team to evaluate the Simplot's design studies of their proposed cover system.

The studies were performed in phases starting with a determination of the engineering properties of mineral materials found on site that could be used to construct the cover. This was followed by one-dimensional, unsaturated flow modeling of about 30 different cover configurations to establish the general feasibility of a store and release cover at the project site in meeting the requirements for the maximum allowable percolation rates established by groundwater modeling. More detailed two-dimensional, unsaturated flow modeling was then completed to establish long-term, average net percolation rates of the cover design. All of the design modeling studies conducted by Simplot and its engineering contractors were evaluated by experts in the technical fields involved who were independent of Simplot and reported to the agencies.

Initial study results indicated net percolation reduction to rates minimally necessary to comply with surface water standards, as indicated by groundwater modeling in the DEIS.

In consideration of agency and public concerns pertaining to impacts from the existing mine, protection of the local Yellowstone Cutthroat trout fishery, and uncertainties that are part of any model results led to discussions of an appropriate margin of safety. Simplot decided to change their proposed cover design from one that just met the required minimum percolation rates to their "Deep Dinwoody" design which is more expensive, but considerably more protective of the environment. The Deep Dinwoody design is the Alternative D design described in **Chapter 2** of the FEIS and analyzed in **Section 4.3** of the FEIS. Analysis indicates that it is about 50 to 60 percent more protective than required by the groundwater models to just meet surface water standards. As shown in **Table 4.3-15** and **Table 4.3-16**, the selenium concentrations predicted by modeling were well below the groundwater and surface water standards.

Cover System Construction Monitoring

Analysis of the Alternative D store and release cover system has been thorough and complete. However, the agencies will require, and Simplot has agreed, to conduct a field test program to supplement the design evaluations with empirical observations and measurements rather than rely solely on modeling.

As described in **Appendix 2E** of the FEIS, two test plots will be constructed with the same type of material that will be used to construct the actual cover over Panels F and G. While the modeling was conducted based on laboratory testing results of bulk samples, the two test plots will allow the agencies to determine that the characteristics of the materials used in construction actually reflect the parameters used in modeling and how variable those characteristics are. Data obtained from the test plots will be provided to BLM, USFS, and IDEQ and could be used to amend, if necessary, the cover design. Simplot will also use this data to develop the Quality Assurance/Quality Control (QA/QC) Plan for construction of the engineered cover over Panels F and G.

Following construction of the test plots, a large-scale test cover will be constructed by Simplot at the existing Smoky Canyon Mine. One objective of this large-scale test is to demonstrate feasibility of constructing a large area of the Alternative D store and release cover using methods shown to be effective from the test plot data. Another objective is to demonstrate the practicality and effectiveness of the QA/QC testing program that was also developed from the test plot effort.

Cover Performance Monitoring

Protection of water resources is dependant on the ability of the store and release cover system to limit infiltration into overburden. One of the main goals of the covers performance monitoring program is to detect potential problems with infiltration before any impacts are created or are detected in the groundwater or surface water. If monitoring data indicate that the cover system or other environmental protection measures are not performing as designed they can be adaptively managed prior to detecting any exceedences of water quality standards. This way, management of the cover system and other environmental protection measures will take place through BLM's mine administration authorities and avoid the necessity for the CERCLA process.

If adaptations to the Mine and Reclamation Plan or other work are required, BLM would prefer to institute remedies with this quicker and more direct approach.

The first part of the performance monitoring will include construction of two test cells within the large-scale test cover. Each test cell will be lined and equipped with instrumentation to allow direct measurement of the net percolation of water through the Alternative D store and release cover. These cells will essentially be large-scale pan lysimeters similar to the established U.S. EPA's Alternative Cover Assessment Program (ACAP). Additional water will be artificially applied to one test cell to produce different conditions than the other test cell, which will be exposed only to naturally occurring moisture conditions. Data collected from the test cells will be analyzed annually by Simplot and used as inputs for calibration runs of the unsaturated flow model for the test cell conditions that existing in each monitoring year. The model results will be compared to the observed conditions and any significant variation between model results and observed conditions would be interpreted. All of these data, model runs and interpretations will be reported to the BLM, USFS, and IDEQ annually. The objective of this monitoring is to measure the performance of the store and release cover under field conditions and to verify the accuracy of the model to simulate these conditions when the observed field conditions are used as model inputs. Prior to test cell installation the Agencies will require Simplot to provide a design with a description of their proposed construction, instrumentation, and monitoring.

As described in **Appendix 2E** of the FEIS, test cells will initially be monitored for a number of years (estimated 3 to 5 years) to obtain performance data representative of the early hydraulic conditions within the cover. All monitoring and modeling data collected over this time period will be critically evaluated by Simplot in one report comparing the overall hydraulic performance of the test cells with the design studies for the store and release cover. The intent is to show if the cover is performing in a manner consistent with the modeling predictions used in the FEIS analysis. If the field testing of the test cover shows it is not as effective as modeled, BLM will require evaluation and implementation of adjustments to the cover over Panels F and G that will maintain compliance with FEIS requirements and applicable water quality standards.

In addition to the test cell monitoring, a full production cover performance monitoring program for Panels F & G will be presented to the BLM, USFS, and IDEQ by Simplot for evaluation and acceptance prior to construction of this cover. The FEIS specifies in **Appendix 2E** the types of monitoring to be included such as meteorological data, measurements of soil moisture and permeability, a water balance (runoff, evapotranspiration, net percolation), vegetation success, and erosion.

<u>Contingencies</u>

Agency concerns and comments on the DEIS and FEIS suggested that the sensitivity of the environmental resources at stake, combined with uncertainty related to hydrologic impact assessments, call for consideration of contingency plans if the proposed cover design does not perform as predicted. Contingency planning is an appropriate consideration but is not a requirement. This matter is addressed through the use of

conservative input assumptions in this hydrologic assessment, which are disclosed in the FEIS, and a process of adaptively managing the design of the cover system if monitoring data indicate that it is not performing as modeled.

It is important to note that the analysis of the selected alternatives in the FEIS does not predict any exceedences of water quality standards in the regional groundwater system or surface water. Modeling of the cover system indicates that it will meet the agency standards and is 50 to 60 percent more protective than required to meet water quality standards. Predicted groundwater and surface water quality impacts are below the legally allowable impacts by a significant margin. Monitoring the percolation rate through the cover is a key indicator with regard to the project's future impacts on groundwater quality and surface water quality. While there is always a possibility that the cover may not perform as designed, there is no indication that it won't. The risk of the cover not performing as described in the FEIS and contaminant loading of the groundwater being higher than predicted is reduced by the monitoring of the test cells, the production cover, and the ability of the cover to be adaptively managed, if necessary, as described in **Appendix 2E** of the FEIS.

Contingencies that allow for corrections in cover design have been included at various stages of the cover monitoring program to allow for adaptive management, if necessary. There are opportunities specifically written into the environmental monitoring for the agencies to require improvements in the cover characteristics during the phased QA/QC program development, during the test cell monitoring, during performance monitoring of the cover system, and as a result of surface and groundwater monitoring. These contingencies are described in **Appendix 2E** of the FEIS.

As is discussed in the Mitigation portion of this decision, Simplot will be required to post a reclamation bond. That bond will be reviewed and if monitoring data indicate that additional measures are required of Simplot to maintain compliance, those costs will be reflected in an updated bond.

Leasing the South Modification Tract Compatible with Forest Service Recommendations

The Manning Creek lease (I-27512) was issued effective January 1, 2001. Prior to leasing, an Environmental Impact Statement was completed to assess the reasonably foreseeable impacts associated with issuing this phosphate lease. As part of the BLM decision process, and as joint lead of the EIS, the Caribou-Targhee National Forest recommended to the BLM in 1998 to only lease the northern portion of the proposed tract; to preclude leasing at that time in the Deer Creek or North Fork of Deer Creek drainages. The letter also recommended no waste rock storage or mine waste dumps, associated with the Manning Creek lease, be allowed in the North Fork Deer Creek drainage to ensure that selenium and/or other hazardous materials were not leached into the Deer Creek drainage system.

The 1998 leasing recommendation also indicated that:

> "However, 200 acres located in the head of one of the tributaries to North Fork of Deer Creek may have the potential to be mined if significant impacts to water quality and fisheries in that drainage can be prevented. In the future we will know more about the potential effects and possible mitigations for the selenium situation associated with phosphate mining in Southeast Idaho. If, in the future, it is demonstrated that phosphate reserves are present in sufficient quantities to justify mining and selenium and other potentially toxic materials can be controlled and downstream effects mitigated, the CNF would be willing to look at a lease modification on the following land: T 9S., R. 45 E., Boise Meridian, Sec. 26: SW1/4, SW1/4SE1/4"

In addition, the 1998 recommendation indicated that:

> "Because of the sensitive nature and importance of the surface resources present in the Deer Creek and North Fork Deer Creek drainages, we strongly recommend against any phosphate leasing now or in the foreseeable for lands within the following description: T 9S., R. 45 E., Boise Meridian, Sec. 27: SE1/4SE1/4; Sec. 34: E1/2, SW1/4; Sec. 35: W1/2."

Since the recommendation and leasing decision, Simplot has applied to modify the Manning Creek lease in the North Fork of Deer Creek drainage. The South Lease Modification area is described in **Chapter 2** and shown on **Figure 2.4-1** of the FEIS. In 2005 and in concurrence with the USFS recommendation at that time, BLM issued an exploration license, Forest Service issued the necessary Special Use Authorizations, and Simplot completed exploration drilling in the South Lease Modification area.

The impact analysis in the FEIS addresses the potential for impacts of selenium and other contaminants on water quality and fisheries resources in the Deer Creek watershed, including North Fork of Deer Creek. This analysis has shown that mitigation of these impacts would reduce the impacts to acceptable levels in compliance with applicable standards.

At this time, the USFS recommends (USDA, CTNF Recommendation letter April 29, 2008) that the South Lease modification be issued and, when and if surface disturbance is determined compliant with any applicable roadless area management, it will be mined according to the mitigated Mine and Reclamation Plan in this decision. There will be very few acres of disturbance within the areas where Supervisor Reese objected to leasing in 1998. The South Lease Modification area contains about 22 percent of the Panel F reserves and almost 11 percent of the reserves for the entire project. This is a significant quantity of phosphate resource that will not be recoverable at another time. As mitigated, the mine plan, including the engineered cover system, demonstrates that selenium and other contaminants can be controlled and downstream effects mitigated. The plan is considered to be sufficiently protective of surface and groundwater resources in the Deer Creek drainage.

Compliance with the Roadless Area Conservation Rule

Since the Draft EIS was issued, the United States District Court for the Northern District of California issued a decision, which had the effect of reinstating the 2001 Roadless Area Conservation Rule (RACR). As a result of this ruling, the RACR currently governs roadless area management on National Forest System lands.

The recent California judicial decision and the 2001 RACR were carefully considered in development of the Preferred Alternative in the FEIS and in this decision. As described earlier, this decision approves the on-lease mining operations and lease modifications to I-27512. It is the USFS's decision to permit off-lease facilities such as access roads and topsoil stockpiles. BLM requested guidance from the Forest Service concerning the effect that the recent reinstatement of the 2001 RACR would have on the FEIS and the proposal to approve a mine plan, modify the Panel F lease, and authorize haul/access roads for the mining operation. In a letter dated February 8, 2007, to the BLM District Manager, the Forest Service described the application of the 2001 Roadless Area Conservation Rule to the proposed operations for the Smoky Canyon Mine expansion.

Both leases to be developed are located within Forest Service Inventoried Roadless Areas (IRAs). According to the February 8, 2007 letter, the proposed on-lease road construction, timber removal and associated mining operations can be approved because the roads are needed in conjunction with the continuation, extension or renewal of a mineral lease on lands under lease as of January 12, 2001, and the timber removal is incidental to management activity not otherwise prohibited by the 2001 RACR.

The mining alternative selected by BLM in this decision authorizes mining and the construction of roads within the lease boundaries. Both existing leases carry the exclusive right to explore for and develop the phosphate resources. The leases were issued prior to January 12, 2001, therefore the 2001 RACR does not apply to the existing leases pursuant to 36 CFR Part 294.14 (a).

The on-lease timber cutting that is required prior to mining is also consistent with the 2001 RACR. The 2001 RACR allows for timber cutting, sale, or removal when it is incidental to management activity not otherwise prohibited.

The RACR does not prohibit the issuance of leases or lease modifications. BLM will issue the North Lease Modification, which lies partially in an IRA, as described in **Chapter 2** of the FEIS. Issuance of the 120-acre north lease modification to the Panel F lease (I-27512) is consistent with the RACR. The Proposed Action Panel F Haul/Access Road is required to access mining operations within the portions of Panel F that are currently under lease. Construction of this road will encounter phosphate ore within the road excavation north of the existing Panel F lease. To enable legal recovery of the ore within the road excavation, the BLM must issue the North Lease Modification. No

additional roads other than those described in **Chapter 2** of the FEIS, to access the ore body will be constructed.

BLM will also issue the South Lease Modification as described in **Chapter 2** of the FEIS, subject to a conditional stipulation which prohibits the lessee from undertaking any mining activities, road construction, and/or surface disturbing activities on the lands until a determination is made regarding whether the RACR applies to the proposed activities, and whether the activities would be allowed or must be modified. The South Lease Modification area lies entirely in an IRA. The only practical time to recover the non-renewable phosphate reserves within the modification area is in conjunction with the operation and mining of Panel F. Because the mine plan provides that mining will not occur in the South Lease Modification area until at least 3 years from the date of approval of the mine plan, no determination is currently necessary regarding which regulations apply to mining activities within the South Lease Modification area. To maintain the status quo on the ground until this determination is made, the mine plan approval and issuance of the lease modification will be conditioned as described above.

When authorized, a lease modification, in this case the South Lease Modification area, takes on the same conditions as the original lease. Lease conditions can only be readjusted every 20 years or with the approval of the lessee. In order to add the above conditions to the lease modification area, the BLM will enter into a Memorandum of Agreement (MOA) with Simplot. A copy of the MOA is attached as Appendix I of this decision. When signed by BLM and Simplot, it will serve as a legal document indicating Simplot's agreement to modify the terms of the existing lease such that, in order to be consistent with the 2001 RACR, no mining activities, road construction, and/or surface disturbing activities will be allowed on the lands described (collectively referred to as the South Lease Modification area) until a determination is made regarding whether the Roadless Area Conservation Rule applies to the proposed activities, and whether the activities are allowed or must be modified.

Under regulations at 43 CFR 3510.20, before a lease modification is issued, a bonus based on the value of the ore reserves contained within the modification, is paid to the BLM. Accordingly, BLM will calculate a bonus. Simplot will pay the bonus into an escrow account as set forth in the MOA. In the event that the Federal government determines that the lessee is able to exercise lease development activities in the South Lease Modification area, the escrow agent will disburse the escrow monies to the BLM. If the development activities are not allowed, the lessee agrees to relinquish the South Lease Modification within 90 days of a final determination and the escrow monies, including interest, would be refunded to the lessee (Simplot).

Because a lease modification carries the same rights to explore for or develop the contained phosphate resource, the MOA also contains provisions such that Simplot, the lessee, would agree not to seek compensation or other damages if they are not able to extract the phosphate from the South Lease Modification area.

Changes to Forest Service management of roadless areas may occur in the future, prior to the need to implement the Mine and Reclamation Plan on the South Lease Modification area, due to new rule making or legal action. For example, the Forest Service has initiated a public rulemaking process to address the management of roadless areas on National Forest System lands within the State of Idaho. The Draft EIS describing a proposed rule was made available for public review and comment on December 21, 2007. The final environmental impact statement is expected 2008. This rule-making process may alter the requirements for management of IRAs in Idaho, including the IRAs associated with this project.

Accordingly, this decision provides that mining operations are consistent with rules in effect at this time, and defers evaluation of those regulatory requirements on the South Lease Modification until development of that area is needed.

Roads constructed in accordance with this Mine and Reclamation Plan, both on-lease and off-lease, will be obliterated when they are no longer needed for purposes of the lease. Where some roads may be needed for long-term monitoring, they may be left passable for some time.

The No Action Alternative Does Not Meet the Purpose and Need

Selection of the No Action Alternative would preclude the mine expansion into Panels F and G, under this Mine and Reclamation Plan. None of the proposed Transportation or Mining Alternatives would be needed or implemented. This would eliminate the local environmental impacts from the mining of Panels F and G. Selection of the No Action Alternative would allow Simplot to continue mining and reclamation at Smoky Canyon Mine under the existing Mine and Reclamation Plan until all ore reserves are depleted. At that time, mining and milling operations at the Smoky Canyon Mine would cease. Pit E-0 would not be backfilled or covered with the store and release cover.

The No Action Alternative would not meet the purpose and need of the proposed action. At the end of the current mine life, mining would cease at Smoky Canyon Mine. The economic impacts of the existing mine operation would cease, although the CERCLA remedial efforts would likely continue. Simplot has no other permitted phosphate properties to mine or to supply the Don Plant. This would directly affect about 560 employees. Indirectly about 1,450 jobs could be affected. Federal royalties which in part are dispersed to Idaho and to Caribou County would no longer be paid. The tax base in Caribou County would decrease. There could be about a 30 percent reduction in ammonium phosphate manufacturing in the western United States. These are not acceptable social impacts in light of a mitigated mine plan that addresses environmental concerns.

Selection of the No Action Alternative does not mean that these two leases would not ever be mined. Selection of the No Action Alternative would not cancel the phosphate leases. A phosphate lease grants the lessee the exclusive right and privilege to explore for and mine the phosphate deposit on the leased lands, subject to the conditions provided

in the lease. These contractual rights must be honored by the United States. The lease also grants the right to use such surface of the leased lands as may be necessary for the development of the phosphate resource. Phosphate leases are not cancelled by the United States, except by due process in the case where the lessee does not meet the terms and conditions of the lease. As the rights to mine the leased phosphate deposits have been acquired, if the No Action Alternative was selected, another Mine and Reclamation Plan for these two leases could be submitted in the future.

The selection of the Mine and Reclamation Plan and mitigation measures in this decision is sufficiently protective of the environment and is predicted to be in compliance with applicable laws and regulations. There is no need to select an alternative that does not meet the purpose and need of the proposal.

MITIGATION AND MONITORING

The approved Mine and Reclamation Plan contains numerous environmental protection measures. These measures apply to the alternatives selected by the BLM in this Record of Decision. After reviewing the potential impacts of the project, certain additional mitigation measures are warranted as determined in the FEIS and the recommendation letter from the Caribou-Targhee National Forest. As conditions of approval for the Smoky Canyon Mine, Panels F & G mine expansion, Simplot or the federal lease holder, its employees, contractors, agents, assignees, and operators must comply with the mitigation and monitoring measures listed below.

Mitigation

- Prior to commencement of ground disturbing activities, Simplot will provide a performance bond for the mine expansion, which will be in addition to the bond already provided for the disturbance at the existing mine. The amount of the bond will include the estimated cost to the government to reclaim the disturbed area of Panels F & G for disturbances to the rest of the on-lease disturbance at the Smoky Canyon Mine. The bond will include the appropriate administrative costs to complete reclamation and costs to conduct monitoring for the duration Simplot holds the lease. In addition the bond will include three months projected lease production royalties. BLM will review this bond on a regular basis. If at any time, monitoring data indicate that additional earthwork or remedial action is necessary beyond what is required in the approved plan, the bond will be adjusted to reflect these additional costs.
- Prior to ground disturbance, Simplot will be required to purchase all merchantable timber within the disturbance footprint under USFS direction.
- Simplot will be responsible for acquiring and complying with all necessary local, state, and federal permits, and for providing documentation of those permits to BLM. Wetland areas within the study area have been identified in the FEIS. Where disturbed, these areas will be appropriately mitigated by Simplot to the satisfaction of the U.S. Department of Army, Corps of Engineers and/or the state

agency with jurisdiction. Simplot will obtain any applicable Clean Water Act permits and certifications for the project.

- Prior to constructing the Panel G East External Overburden Fill, if there has not been an approval for off-lease storage of overburden, Simplot will submit an updated external overburden fill design for agency consideration in which all overburden remains on-lease.
- Simplot will provide the Federal land management agencies copies of their plans for conducting research on public lands. Simplot will promptly provide the Federal land management agencies with copies of research collected on public lands.
- Simplot will continue to comply with existing conditions of approval that were attached to the original Smoky Canyon Mine and Reclamation Plan approval and Record of Decision, and all subsequent conditions of approval. The BLM Authorized Officer will provide direction regarding any conflict, if necessary.

Appendix II to this decision, contains all of the mitigation measures that have been required either in the FEIS or as determined by the agencies in their respective decisions. This appendix includes all of the mitigation measures beyond the environmental protection measures proposed by Simplot in the Proposed Action that are described in **Section 2.5, Appendix 2C, and Appendix 2D.**

Monitoring

Simplot currently conducts extensive monitoring at the Smoky Canyon Mine as described and approved in their existing Smoky Canyon Mine Environmental Monitoring Program Plan. Where applicable, these existing monitoring requirements are made a condition of approval for Panels F and G. The monitoring requirements listed in this decision, which are further described in **Appendix 2E** and **Appendix 4B** of the FEIS, are additional conditions of approval requiring monitoring specific to Panels F and G.

- Simplot will supplement the existing Smoky Canyon Mine Environmental Monitoring Program Plan and provide the full plan with the requirements for Panels F and G as described in this decision to BLM and USFS for approval consideration no fewer than **120 days** from Simplot's start of ground disturbing activities. A final version, containing any required revisions, of the updated monitoring plan will be re-submitted **30 days** prior to the start of ground disturbing activities.

A summary of the monitoring required is included in Appendix II of this decision. Monitoring is further described in **Section 2.10.1**, **Chapter 4**, **Appendix 2E**, and **Appendix 4B** of the FEIS. Appendix II includes monitoring of groundwater, surface water, soil, vegetation, fisheries, cultural resources, and the cover system.

ALTERNATIVES CONSIDERED

Alternatives Considered in Detail

Issues that were raised during public scoping and during public and agency review of the Proposed Action were used to identify potentially significant impacts that could result from the proposed mine expansion. A range of alternatives to the Proposed Action were developed from the issues identified. Reasonable alternatives were fully analyzed. In the FEIS, there are six alternatives for mining activities, identified as Mining Alternatives A through F. There are also eight alternatives for the transportation of ore, personnel, and materials, identified as Transportation Alternatives 1 through 8. The No Action Alternative was also considered. Impacts of these mining and transportation alternatives, as well as the Proposed Action, are evaluated in **Chapter 4** of the FEIS.

In addition to the alternatives that are being considered in detail, four other mining alternatives and nine transportation alternatives were considered but eliminated from this analysis and are described in **Section 2.7** of the FEIS.

Mining Alternatives

Alternative A – No South and/or North Panel F Lease Modifications – This alternative modifies the Proposed Action by assessing the impacts of not mining the ore within the North and/or South Panel F Lease Modification areas. It addresses scoping concerns about allowing new leases and mining in IRAs. Simplot has applied for a two-part lease modification to expand Federal Phosphate Lease I-27512 for the Panel F operations: a smaller 120-acre lease modification on the northern edge of the lease (North Lease Modification), and a larger 400-acre lease modification on the southern edge of the lease (South Lease Modification) as shown on **Figure 2.4-1** of the FEIS. The Proposed Action includes mining plans for these areas. The change in environmental impacts from not issuing these lease modifications and not mining these areas are evaluated in the FEIS in this mining alternative.

Under Alternative A the area of Pit 3 would be greatly reduced and the mine disturbance would not cross over the topographic divide into the Deer Creek drainage. In addition to mining less ore, the reduced mining plan would also involve handling less overburden so the final reclamation contours would be different (**Figure 2.6-2** of the FEIS).

If this alternative had been selected, there would be no Panel F mining disturbance outside of the existing Lease I-27512 boundaries. The mining disturbances included in the Proposed Action for the North and South Lease Modifications would not occur, with the exception of the Proposed Action power line that would remain in the same location regardless of this alternative.

Approximately 22 percent of the ore in the Panel F Proposed Action mine plan would not be recovered if the South Lease Modification area is not developed. The North Lease Modification is intended to allow recovery of phosphate ore while building the Proposed Action haul/access road north of the existing lease, but more importantly it allows mining

of the phosphate ore topographically lower than could be accessed from other routes. Approximately 6 percent of recoverable phosphate reserves in Panel F would be lost without the approval of the North Lease Modification.

This alternative was not selected because non-renewable phosphate resources contained within the lease modification areas would be bypassed and left un-mined, even though there is a mine and reclamation plan that sufficiently mitigates impacts to the environment. The selected alternative includes mining and mitigation measures that address water quality concerns expressed by the USFS for mining within the Deer Creek drainage in the initial leasing of I-27512. BLM typically leases mineral reserves at a point in time when limited geologic information is available in the form of exploration drill hole data in and around the proposed lease area. The exact nature and extent of the reserves is often not fully known when leases are issued. Lease boundaries can be modified when it can be shown that the mineral deposit extends off-lease, the lands lack sufficient ore reserves to warrant independent development, and other criteria are met (43 CFR 3510).

The selected alternative, which includes modifying lease I-27512, allows for recovery of all portions of the existing phosphate deposit that extends slightly off of the existing phosphate leases. The selected alternative satisfactorily mitigates impacts to the environment and at the same time allows for recovery of phosphate resources that would not be practical after mining the existing leases has been completed and operations move to another location. Alternative A preserves the environment at the cost of losing significant, non-renewable phosphate reserves that can and should be utilized by society's needs at this time. It is likely that the only prudent time to mine these phosphate reserves within the lease modification areas is at the present, along with the reserves that will be mined on the existing leases by Simplot's operation.

BLM's issuance of the lease modification to I-27512, subject to a stipulation for the South Lease Modification, as described above, will not violate Forest Service regulations managing IRA's. A more full discussion of compliance with IRA management is located in the section entitled "Compliance with the Roadless Area Conservation Rule" of this Decision.

Alternative B - No External Seleniferous Overburden Fills – This alternative addresses scoping concerns about potential selenium contamination to groundwater and surface seeps from external overburden fills. In this alternative, all the overburden initially proposed for disposal in the external overburden fills would still be placed there during mining as in the selected alternative; however, 4.7 MM BCY of seleniferous overburden would subsequently be removed from the external fills and placed back in the pit backfills during final stages of mining. The duration of reclamation work would increase in this alternative because of the need to double handle more of the overburden material than under the selected alternative. This would result in a delay in reclamation of approximately 6.5 months from the concurrent reclamation of the selected alternative.

The volume of overburden permanently disposed of in the external overburden fills would be less, changing the final contours of these areas compared to selected alternative. See **Figure 2.6-3** of the FEIS.

The area potentially requiring the store and release cover system would be less than the selected alternative because all seleniferous overburden would be consolidated to a smaller footprint area.

Due to the additional costs associated with this alternative, selection of this alternative would reduce ore recovery by about 19 percent and could shorten the overall mine life by about 3.2 years (**Section 4.1.1.2** of the FEIS).

Alone, this alternative is expected to have slightly less impacts to water quality than the Proposed Action, but it is still not expected to meet all water quality criteria in groundwater or surface water. For this reason, BLM has not selected Alternative B, but has selected Alternative D – the only mining alternative sufficiently protective of water quality. With the selection of Alternative D, it is not necessary to also include the backfilling of all seleniferous overburden as described in Alternative B. The store and release cover will effectively mitigate impacts to water quality and will prevent formation of seeps at the base of the external overburden fills. There is no additional need to incur the additional loss of recovery related to Alternative B when selection of Alternative D has sufficiently mitigated the water quality impacts.

Alternative C - No External Overburden Fills at All – This alternative addresses scoping concerns related to environmental effects from external overburden fills. It addresses water quality issue by requiring all overburden be placed back into the pits as backfill and addresses concerns related to leaving pit highwalls. In this alternative, all the overburden initially proposed for disposal in the external overburden fills would still be placed there during mining, however all of this overburden would subsequently be removed from the external fills and placed back in the pit backfills. Operations would need to be extended by about 12.5 months to allow time for all this overburden to be relocated back to the open pits.

This alternative would also have approximately the same initial disturbance footprint as the selected alternative because the full external overburden disturbance area would be needed to temporarily store the overburden, which would all then be relocated to the pits during final stages of mining. The remaining highwalls would be eliminated in this alternative compared to the other mining alternatives as shown in Figure **2.6-4** of the FEIS. The area potentially requiring the store and release cover system would be less than the selected alternative.

Due to the costs associated with the increased rehandling of this alternative, selection of this Alternative C would reduce ore recovery by about 46 percent and could shorten the overall mine life by about 7.7 years (**Section 4.1.1.2** of the FEIS). It is likely that Panel G would not be economically viable under this alternative.

Water quality impacts from Alternative C would be very similar to impacts from Alternative B and are not expected to meet all water quality criteria in groundwater and surface water. For this reason BLM has not selected Alternative C, but has selected Alternative D – the only mining alternative sufficiently protective of water quality. With the selection of Alternative D, it is not necessary to also include the backfilling of all overburden as described in Alternative C. The store and release cover will effectively mitigate impacts to water quality and will prevent formation of seeps at the base of the external overburden fills.

There is no need to incur the additional loss of recovery related to Alternative C when selection of Alternative D has sufficiently mitigated the water quality impacts. Rehandling all external overburden fills to accomplish a complete backfill condition is not standard industry practice and would come at a significant cost to the non-renewable resource. Because of the costs and loss of recovery, full backfill could lead to Simplot mining only the most economically viable ore and moving on to creating disturbance for a whole new project, rather than keeping mining in this location and recovering as much resource as possible.

Alternative D - Store and Release Cover on Overburden Fills – This selected alternative addresses concerns over groundwater impacts from infiltration of precipitation into seleniferous overburden, which could then percolate out the bottoms of the overburden fills and eventually impact groundwater beneath and connect with surface water adjacent to these sites. This alternative is fully described in **Section 2.6.1** of the FEIS. It is also discussed earlier in this decision as it pertains to water quality impacts and compliance with applicable standards.

The cover design analyzed in the FEIS is different - more effective - than the conceptual design discussed in Alternative D in the DEIS. Alternative D was adjusted in response to comments on the DEIS that this water quality mitigation should go farther than just "meeting" applicable water quality standards, it should have a margin of safety. In addition to being protective of water quality, at over six feet thick, the cover will also reduce uptake of selenium by reclamation vegetation and will minimize erosion of seleniferous material after reclamation. By protecting vegetation from selenium uptake, wildlife is also protected from selenium exposure. As the mining alternative most protective of surface water, it is also the alternative most protective of fisheries.

The groundwater impact analysis of the Proposed Action and Mining Alternatives A through C using Simplot's Proposed Action cover of 1-2 feet of topsoil and 4 feet of chert indicated that there would be exceedences of groundwater and surface water standards for selenium. The water quality impact analysis for Alternative D in the DEIS was based on empirical data, laboratory testing, modeling, and comparison of results to local field conditions. The analysis indicated the maximum allowable percolation rate through the overburden fills to the groundwater that would just comply with applicable water quality standards. The conceptual design of an infiltration barrier that was intended to provide the necessary control on percolation was presented for this alternative in the DEIS. In the DEIS, Alternative D was conceptually proposed as consisting of a 12-inch thick, compacted Dinwoody Formation shale infiltration barrier covered with chert and topsoil.

The DEIS also indicated that final designs may be different than described but would still provide the level of infiltration reduction required to protect groundwater and surface water quality to levels in concert with applicable regulatory requirements.

Following release of the DEIS, Simplot conducted extensive engineering, geotechnical and hydrologic studies of the conceptual design which resulted in their submission of a modified cover design for analysis in the FEIS that would provide improved performance compared to the design proposed in the DEIS. The design studies also addressed comments received on the DEIS that uncertainties with modeling should be accommodated in a final cover design that should be more protective of water quality than the conceptual design evaluated in the DEIS.

For analysis in the FEIS, Simplot submitted a Store and Release cover design. A store and release cover limits net percolation of moisture into underlying materials not with a low permeability infiltration barrier but by maximizing soil moisture storage for the subsequent removal of stored moisture by evapotranspiration. The greater the storage capacity of moisture in the root zone and evapotranspirative properties of the top layers of a cover with vegetation, the lower the potential for percolation through the cover system.

Comments on the DEIS suggested that the BLM, USFS, and IDEQ should evaluate a cover design that would reduce net percolation into the overburden to the maximum extent possible. In response to this concern, part of the way through the analysis in the FEIS, Simplot updated their design to a more effective design called the Deep Dinwoody Design. With this change, the cover analyzed in the FEIS effectively became the design with the minimum net percolation that is economically feasible.

Analysis determined that this design, with its average 0.6 inch/year net percolation rate would limit percolation to less than the target rate for the northern portion of Panel F (0.8 inch/year), and significantly less than the target rate for the southern portion of Panel F (1.5 inch/year) and Panel G (1.2 inch/year). Economic evaluations of the cost of this design showed it would result in a reduction of ore recovery of approximately 18 percent of the total mining reserves in the Proposed Action, which would shorten overall mine life by approximately 2.9 years (**Section 4.1.1.2** of the FEIS).

The selection of this design for Alternative D at Panels F and G does not necessarily set precedent for other phosphate mines in Southeast Idaho. The cover design is specific to this project, its potential impacts, the hydrogeological setting of the Smoky Canyon Mine, and its unique connection between groundwater resources and nearby surface water.

Reclamation activities will commence within about 18 months of beginning mining in Panel F and then will be concurrent with mining thereafter (**Table 2.4-1**). As the overburden fills are regraded to final slopes, the store and release cover will be constructed over the areas of seleniferous overburden fill. Constructing the cover concurrently with active mining will reduce the amount of time the overburden is

exposed to surface runoff and weathering effects. It will also reduce the time period when infiltration of precipitation and runoff will be directly into the overburden. This will reduce the exposure to leaching at Panels F and G compared to previous mine panels at the Smoky Canyon Mine and will reduce the potential for development of overburden seeps at external overburden fills and seleniferous leachate entering the Wells formation under pit backfills.

The revegetation of the store and release cover will be as described in **Sections 2.4** and **2.5** of this FEIS. It will also include reforestation per USFS direction described in the Mitigation section of this decision. Revegetation will occur concurrently with ongoing mining operations. Timely revegetation of the topsoil on top of the store and release cover will reduce the net percolation into the underlying overburden at Panels F and G compared to previous mine panels at the Smoky Canyon Mine.

Construction monitoring and effectiveness monitoring of the cover are thoroughly described in **Appendix 2E** of the FEIS and are also described above in the Compliance with Water Quality Standards section of this decision and in the Monitoring appendix of this decision.

Alternative E –Power Line Connection from Panel F to Panel G Along Haul/Access Road In this selected alternative, electric power for the proposed mining operations would be provided with a 25kV, single-pole structure, power line extending southward along the selected haul/access roads from the existing power line in Panel E. The power line would be constructed within the footprint of the Agency Preferred haul/access roads (**Figure 2.6-7** in the FEIS). The power line would consist of approximately 30-foot tall single-pole wooden structures with a nominal span of approximately 330 feet. Approximately 16 pole structures per mile would be needed for straighter sections of the line, and more poles would be required to route the line around sections of the road having curvature.

Selection of this alternative reduces the surface disturbance by eliminating the need for a separate disturbance area to contain the power line. There will be less disturbance in the Deer Creek watershed. Because there will be slightly less surface disturbance there would be slightly less impact to soil, vegetation, wildlife, fisheries, and livestock grazing, IRA's, and visual resources.

Alternative F – Electrical Generators at Panel G – In the FEIS, the BLM and USFS evaluated an alternative that would negate the need for any power line at all to Panel G through the use of generators located at the hot starts area of Panel G. The required generator capacity would be 1,100 to 1,200 kW. It would be powered by a 1,500 HP motor running continuously and using about 63 gallons of fuel oil per hour. For continuity of electrical service during normal maintenance and/or break downs, two such generator sets would be required, with one on automatic standby status at all times.

A separate oil tank would be added to the hot starts tank farm to hold the fuel for the generators and would be included within the secondary containment and SPCC procedures that would apply to the rest of the tanks.

Of the five air emissions analyzed in **Section 4.2.1.3** of the FEIS, this alternative would emit the most nitrogen oxides, sulfur dioxide, carbon monoxide, and volatile organic compounds compared to Simplot's Proposed Action and the other mining alternatives. This alternative would also increase potential for fuel spills and would increase the mines waste disposal activities. Because the selected Alternative E essentially mitigates the surface impacts of the power line this, more costly and less environmentally preferable, alternative to power line construction was not selected. The need does not outweigh the reduction in ore recovery or environmental impacts. The capital cost of the generators is similar to the power line, but the operating costs are much higher. It is estimated that selection of this alternative would reduce ore recovery by about 38 percent and could shorten the overall mine life by about 6.5 years (**Section 4.1.1.2** of the FEIS).

Transportation Alternatives

An important component of the mine expansion is transportation of ore over a number of miles from the mine panels to the existing Smoky Canyon Mine mill. The haul/access roads would also be used for transportation of personnel and materials from the current Smoky Canyon Mine south to the mine panels. The environmental effects of the proposed Panel F and Panel G haul/access roads were evaluated separately in the FEIS so they could be compared against a total of eight Transportation Alternatives that were also evaluated. Nine other transportation alternatives were also considered and eliminated from further evaluation; they are described in **Section 2.7.2** of the FEIS.

The haul/access roads are on National Forest System lands located primarily off of the federal mineral leases administered by BLM. The Forest Service was a joint lead agency in preparing the FEIS and will select the transportation alternative to be administered under a Special Use Authorization(s). The Forest Service and BLM have worked throughout the evaluation process and preparation of the FEIS to issue separate, but coordinated decisions for the mine plan and the transportation routes.

The Transportation Alternatives are described in detail in **Section 2.6.2** of the FEIS and are displayed on **Figure 2.6-8a of the FEIS**. They include:

- Alternative 1 - Alternate Panel F Haul/Access Road,
- Alternative 2 - East Haul/Access Road,
- Alternative 3 - Modified East Haul/Access Road,
- Alternative 4 - Middle Haul/Access Road,
- Alternative 5 - Alternate Panel G West Haul/Access Road,
- Alternative 6 - Conveyor from Panel G to Mill,
- Alternative 7 - Crow Creek/Wells Canyon Access Road, and
- Alternative 8 - Middle Access Road.

Alternative 1 would follow an alignment from Panel E to Panel F that would avoid entering the Sage Creek Inventoried Roadless Area. Alternative 2 would connect Panel G to the Panel F haul/access road on an alignment down (east) to the mouth of Deer Creek Canyon and then north along the east flank of the Webster Range. A portion of the Alternative 2 alignment would cross private land. Alternative 3 would be similar to Alternative 2 but would avoid crossing private land near the mouth of Deer Creek Canyon. Alternative 4 would connect Panels F and G along an alignment on the east slope of Freeman Ridge. Alternative 5 would be similar to the Proposed Action but would exit the south end of Panel F rather than the middle of the west side. Alternative 6 would include a conveyor to transport ore from Panel G to the mill and would also require implementation of either Alternative 7 or 8 for access to Panel G. Alternative 7 consists of widening and improving the Crow Creek and Wells Canyon roads to serve as all-season personnel and vendor access to Panel G. Alternative 8 would be an access road only, connecting Panels F and G along the east flank of Freeman Ridge. Alternatives 1 through 5 would be haul/access roads for movement of ore, personnel, and supplies. Alternatives 7 and 8 would only be access roads as ore would be transported by a conveyor (Alternative 6) if either of these alternatives were selected.

No Action Alternative

Under this alternative, there would be no approval for mining the existing federal leases comprising Panels F and G. None of the proposed Transportation or Mining Alternatives would be needed or implemented. This would eliminate the local environmental impacts of mining Panels F and G for the time being. The existing, approved mine panels would continue to be mined and reclaimed as currently permitted until the ore reserves are exhausted, at which point mining and milling operations at the Smoky Canyon Mine would cease.

The No Action Alternative does not imply that the leases would never be developed, only that they would not be developed under this Mine and Reclamation Plan submittal. A phosphate lease grants the lessee the exclusive right and privilege to explore for and mine the phosphate deposit on the leased lands, subject to the conditions provided in the lease. It also gives the lessee the right to use such surface of the leased lands as may be necessary for the development of the phosphate resource. Phosphate leases are not cancelable by the United States, except by due process in the case where the lessee does not meet the terms and conditions of the lease.

As the rights to mine the leased phosphate deposits have been acquired, if the No Action Alternative were selected, another Mine and Reclamation Plan for these two leases could be submitted in the future. BLM has not selected this alternative as the selected alternatives reasonably address the environmental impacts from mining the tracts. It allows Simplot to exercise the exclusive development rights granted in the phosphate leases at the time they were issued by the United States.

Environmentally Preferable Alternative

Selection of the No Action Alternative would have the least environmental impacts of all the analyzed alternatives. None of the proposed transportation or mining alternatives would be implemented. This would eliminate the local environmental impacts from the mining of Panels F and G. Mining and reclamation would continue, according to approved plans, at the existing mine until phosphate reserves are depleted. At which point, mining and milling operations at the Smoky Canyon Mine would cease.

If the No Action Alternative was selected, Pit E-0 would not be backfilled and the 30-acre test of the store and release cover over Pit E-0 would not be constructed as part of this mine plan. Existing monitoring data indicates that increases in selenium concentration at South Fork of Sage Creek Springs, adjacent to Panel E at the existing mine, may in part be caused by the unfilled Pit E-0 and other Panel E disturbance. It is possible that any further remedial actions would have to be implemented under CERCLA or under mine plan administration. As described in the Principle Considerations section of this decision, the No Action alternative does not meet the purpose and need of Simplot's proposal. However, the selected alternative meets environmental mitigation needs for the project and pertinent legal requirements.

The FEIS was organized so that several different measures designed to mitigate the effects of the mine expansion could be compared as separate alternatives. Each alternative or mitigation measure that goes beyond the proposed action has a cost associated with it. Those costs were analyzed in the FEIS and are displayed as a reduction of ore reserves or mine life in Chapter 4 of the FEIS.

As far as on-lease "action" alternatives are concerned, selection of Alternative A (not issuing the South Lease Modification), Alternative C (no external overburden fill) and Alternative D (construction of Store and Release Cover) combined with Alternative E (power line in haul/access road corridors) could potentially have the least environmental impacts.

Selection of Alternative A includes not issuing the South Lease Modification. As such, there would be less overall disturbance and there would be no disturbance from Panel F in the Deer Creek watershed. Selection of Alternative C has similar protection of water resources to Alternative B; would decrease the area of possible ground water impacts; and would more completely backfill the pits, leaving less highwall exposed. Alternative D is selected by the BLM and reduces surface and groundwater impacts to levels which are well below applicable water quality standards. The effects of combining Alternatives C and D to water resources were not analyzed in the FEIS, but the effects could be preferable than with Alternative D alone. Alternative E eliminates the need for a disturbance corridor solely for the power line, and is also part of the BLM selection.

Not issuing the South Lease Modification, as described in Alternative A, would preclude recovery of the phosphate ore contained in this area. There are not sufficient reserves to support a stand alone phosphate operation. If the ore is not recovered under this Mine and Reclamation Plan, it likely will never be recovered. This is a loss of a valuable public resource. Combined, the costs associated with Alternatives C and D have

significant impacts to the economic viability of the expansion. Together they could result in a loss of 67 percent of the ore reserves, likely rendering the Environmentally Preferable Alternative the same as the No Action Alternative- neither of which meet the purpose and need of the project.

PUBLIC INVOLVEMENT

Public Involvement Process

Following receipt of Simplot's preliminary Mine and Reclamation Plan, the BLM published a Notice of Intent (NOI) to commence public scoping on September 15, 2003. Legal notices and several press releases were published. Public comments received during the scoping period, which included public meetings, were used to determine the issues and alternatives for evaluation in the environmental analysis. Public comments were submitted by agencies, Tribal governments, groups, and interested citizens.

The DEIS was released for public review in the end of December, 2005. The BLM initiated a 60-day DEIS review period with publication of a Notice of Availability (NOA) in the Federal Register on December 29, 2005, and the EPA published its NOA on December 30, 2005. The BLM extended its comment period through March 21, 2006. Three public meetings were held January 17, 18, and 19, 2006, in Pocatello and Soda Springs, Idaho and Afton, Wyoming, respectively. Agencies, tribal governments, organizations, and interested parties provided comments on the DEIS via mail, email, and comment forms at public meetings. A total of 38,616 letters, email, and comment forms were received. Public comments are addressed in **Chapter 7** of the FEIS. Of the comments received, 1,055 were original (or substantive) comment letters. The remaining were form response letters or other organized response campaigns.

The project mailing list was originally compiled by the Forest Service and BLM and was composed of individuals, agencies, or organizations who had expressed interest in similar projects. The mailing list was revised as needed by adding individuals who responded to the scoping letter, legal notice, Notice of Intent, public meetings, Draft EIS, and unsolicited commenters. All substantive commenters from the DEIS were added to the project mailing list. The mailing list for the FIES is located in **Chapter 6** of the FEIS.

Release of the FEIS started October 17, 2007. A joint BLM and USFS Notice of Availability was published in the Federal Register on October 26, 2007. The EPA Notice of Availability was also published on October 26, 2007. The EPA's notice started the BLM's mandatory 30-day availability period, before which a decision will not be issued. This period is not a comment period. It is a period of time in which the FEIS is available to the public prior to the BLM decision. BLM and USFS received numerous letters requesting an extension of this period. A 30-day extension was added to the availability period. It allowed additional time for the public to review the FEIS. The EPA and BLM published notices of the extension in the Federal Register on November 9, 2007 and November 16, 2007, respectively. In addition, the BLM and USFS issued a joint press

release to numerous media and a Public Notice was placed in the Idaho State Journal on Nov. 9, 2007.

The BLM and USFS received over 47,000 comments in response to the release of the FEIS. The vast majority of those responses were form letters from organized campaigns. Of the letters received, about 260 contained unduplicated, substantive, content for consideration. All responses to the FEIS were reviewed and considered to determine if they contained new and significant information that could trigger the need for supplemental analysis. The BLM has determined that the responses did not contain information that triggered the need for supplemental analysis.

Summary of Public Comments

Comments received by the agencies from scoping through release of the FEIS generally identified concerns in the following categories: potential effects of the mine expansion on IRA's, water quality, wetlands, wildlife and fishery habitats, livestock grazing, soils, air quality, socioeconomics, private property values, forested areas, and recreation. The BLM also received comments concerning reliance on CERCLA remediation for compliance, development of Best Management Practices (BMPs) for mine operations, selection of alternatives, bonding, contingency plans, environmental monitoring, 1868 Fort Bridger Treaty Rights, and history of permitting phosphate mines that have lead to CERCLA actions. Some comments received were out of the scope of the project and some members of the public expressed various concerns regarding the NEPA process.

In response to the FEIS, an alternate model to the BLM's groundwater Fate and Transport model was submitted by the Natural Resources Defense Council representing also the Greater Yellowstone Coalition, the Caribou Clean Water Partnership, and the Idaho Conservation League for consideration. The alternate model was developed by these groups with characteristics and input parameters that were different than those used in the FEIS. The BLM has carefully considered this new model, but has determined that some of the important parameters such as chemistry inputs, boundary conditions, and physical geology do not meet the standards of those used in the FEIS. This alternate model is not as scientifically sound as the model used in the FEIS analysis and consequently it contains results that are unacceptable and conclusions that are substantially incorrect. For that reason, the BLM will rely on the groundwater Fate and Transport model developed for and described in the FEIS. The results of the analysis in the FEIS are used to distinguish between alternatives and to reasonably reflect impacts for the determination of compliance with applicable standards.

Extensive and detailed comments about impacts to fisheries were received in response to the FEIS. Assertions were made regarding the thoroughness and objectivity of the analysis. These comments have been fully considered. The assessment of effects on fisheries in the FEIS is thorough, objective, and appropriate. Both the DEIS and the FEIS acknowledge possible impacts to local fisheries, including Yellowstone cutthroat trout. Impacts could either be through direct disturbance or through chemical contaminants and bioaccumulation. Elevated levels of selenium are linked to toxicity, reproductive failure,

and other effects in fish. The issue of phosphate mining impacts to native fish populations was assessed in detail and considered. In response to comments on the DEIS, an extensive review of literature and studies related to the effects of selenium on fish, the behavior of selenium in streams including bioaccumulation, and applicable selenium guidelines was conducted. **Appendix 3C** of the FEIS clearly describes the range and dichotomy of scientific opinions as to what selenium thresholds would result in impacts to the local fisheries. It is not within the scope of the FEIS to definitively resolve this scientific debate; rather the FEIS presents the body and range of information regarding the issue for full consideration. In projecting potential impacts the FEIS also considers and heavily weights the Clean Water Act standard in place at this time. Population data indicate that Yellowstone cutthroat trout populations in the watershed are considered strong even with the impacts from the existing Smoky Canyon Mine. With the environmental protection measures incorporated into this project BLM does not expect the selected alternative to change those conditions. When the reasonably foreseeable CERCLA remedial action at Pole Canyon and reclamation at Panel E are considered, the existing situation is expected to improve. Nevertheless, Simplot will be required to conduct extensive fisheries-specific mitigation, described in **Appendix 4B** of the FEIS, to reduce sediment loads to the watershed and improve connectivity and the ability of fish populations to naturally rebound just in case impacts are detrimental to the local fishery. A three pronged approach of monitoring fish populations, habitat, and contaminant concentrations in fish tissue and the aquatic environment is also required and is further explained in **Appendix 2E** and the Monitoring appendix of this decision.

In addition, responses to the FEIS include assertions that the FEIS presents a biased analysis that does not present the economic trade-offs if the expansion is approved. **Section 3.16.4** of the FEIS, describes the local area as having a decreasing dependence on mining over time. Over a similar time frame, personal income in the area from dividends, interest, and rentals has increased; also indicating less reliance on the mining industry. These changes have taken place while the Smoky Canyon Mine has been in operation. It is expected that this decision would not hinder this shift in the local economy to less reliance on the mining industry. As described in **Section 7.3.19** of the FEIS, the economic growth that has already occurred in Star Valley indicates that the presence of the mine does not have a negative effect on the area's economic growth.

Government Consultation

Because of its special expertise and authority under various environmental regulations such as the Idaho Groundwater Protection Rule, the BLM and USFS invited the Idaho Department of Environmental Quality (IDEQ) to participate as a cooperating agency on the EIS. During the preparation of the groundwater and surface water related portions of the DEIS and FEIS, IDEQ participated in data collection, analysis, and document review and in the project conference calls and meetings as needed.

The following state and federal agencies were consulted during preparation of the EIS:

Idaho Conservation Data Center

Idaho Department of Environmental Quality
Idaho Department of Fish and Game
Idaho Department of Lands
Idaho Department of Water Resources
Idaho State Historic Preservation Office
Wyoming Department of Environmental Quality
Wyoming Game and Fish Department
U.S. Army Corps of Engineers
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
U.S. Geological Survey

In its comments on the DEIS, Wyoming DEQ requested that BLM and USFS coordinate with it regarding future activities that have the potential to impact Wyoming's water, air, and land resources. While analysis of water quality was underway on the FEIS, Wyoming DEQ was included in the conference calls. A tour of the existing mine and project study area was given to several Wyoming State agencies, including a representative of the Governor's Office.

Following revisions in the FEIS, agencies coordinated those changes with EPA via conference call. Prior to release of the FEIS, the BLM, Forest Service and IDEQ provided preliminary versions of the FEIS to EPA for review and met with EPA Region X staff to present the water quality analysis, monitoring plans, and discuss the project.

BLM has updated local Idaho congressional staffs and Wyoming congressional staffs of issues and progress during the EIS process.

Government-to-Government Consultation with Shoshone-Bannock Tribes

Throughout the EIS process, from scoping to release of the FEIS and in discussing this pending decision, the BLM, USFS, and Shoshone-Bannock Tribes have engaged in the government-to-government consultation process. It is recognized that this is an ongoing process of open dialog and communication between the BLM, USFS and the Fort Hall Business Council - the governing body of the Shoshone-Bannock Tribes. There have been five government-to-government meetings between BLM Managers representing the United States and the Fort Hall Business Council; one to provide a project overview prior to release of the DEIS, two consultations to discuss the DEIS and Tribal comments; and two consultations to review the agency Preferred Alternative and notify the Council of the FEIS release. In addition to formal consultation, there have been three field trips, four technical meetings, and numerous letters exchanged. Responses to the Council's comments on the DEIS are contained in **Chapter 6** of the FEIS. The BLM recognizes the Fort Hall Business Council's opposition to the project. The effects of not allowing the mine expansion have been fully considered under the No Action Alternative.

As more fully described in **Section 6.3** of the FEIS and in the project record, the Fort Hall Business Council has made clear their opposition to the project; which includes but

is not limited to the need to protect the affected resources and the need to protect Tribal Treaty rights as reserved in the Fort Bridger Treaty of 1868. The analysis in the FEIS acknowledges that the active portions of the mine will be restricted for the protection of the public and tribal members. The Fort Hall Business Council has stated that there needs to be mitigation for temporary and permanent impacts to the Shoshone-Bannock Tribes and for their loss of ability to access and implement their Treaty Rights.

Land and resource impacts (i.e. wildlife, water quality, etc.) have been analyzed and disclosed in the analysis. Environmental protection measures and mitigation of these land and resource impacts are described within various sections of the FEIS and this decision. The Shoshone-Bannock Tribes hold off-reservation hunting, fishing, and gathering rights on unoccupied lands of the United States. The BLM recognizes that these rights, and the resources associated with these rights, may be impacted temporarily by closing access to active mine areas for safety reasons, and permanently because not all acres to be disturbed by the selected alternative will be fully reclaimed. Where possible, the selected alternative protects these rights to the greatest degree practical while still meeting the purpose and need of the project.

This decision includes appropriate mitigation for the disclosed impacts. It is the intent of the BLM to require adequate protection of land, water, and wildlife as part of this Mine and Reclamation Plan approval, to ensure the long-term ability of the Shoshone-Bannock Tribes to exercise their treaty rights.

As described in the FEIS and this decision record, the project contains extensive measures for protection and restoration of resources including migratory birds, vegetation, wildlife, water quality and fisheries. The Fort Hall Business Council has suggested numerous additional mitigation measures should be required, some of which include: requiring Simplot to transfer land to tribal or Federal agencies; requiring Simplot provide cut timber to tribal members; requiring Simplot to purchase reclamation seeds from the Shoshone-Bannock tribes; and requiring Simplot to hire tribal members to conduct the federally required monitoring. In response to the FEIS, Fort Hall Business Council requested additional mitigation such as ethnographic studies, fisheries studies, and funding for tribal monitoring of mining impacts. BLM approached Simplot about the potential of replacing the federal land base converted by the mine with the acquisition of other land to be administered by the BLM near the project area. BLM also approached them about providing tribal access to Simplot's private land near the project area during hunting season. Both suggestions were considered and rejected by Simplot. Because there are no regulations requiring the BLM to provide these or similar mitigation measures, the BLM on several occasions during consultation has offered to facilitate meetings between the Fort Hall Business Council and Simplot to resolve the mitigation issues. Neither party has expressed a willingness to participate in those discussions.

BLM manages resources on public lands according to the multiple-use principles of the Federal Land Policy and Management Act and the principle of sustainable development. The Mine and Reclamation Plan approved in this decision accommodates the development rights granted in the federal mineral leases while at the same time is

adequately protective of the environment and Treaty resources. In selecting Alternative D, BLM has selected the mining alternative which is considered to be protective of the water resources, the aquatic environment, vegetation, wildlife, and fisheries. In addition to the environmental protection measures described in **Section 2.5, Appendix 2C, and Appendix 2D**, mitigation measures as described in this decision have also been added to provide additional protection to resources. The approved Mine and Reclamation Plan is expected to be in compliance with all applicable rules and regulations. The BLM has fulfilled its Trust Responsibility as a land management agency in protecting those resources related to the Shoshone-Bannock Treaty rights.

In their response to the FEIS, the Business Council also stated that "The Tribes believe high-elevated locales are spiritual and sacred places." Without a more specific description or recordation as a Traditional Cultural Property this is recognized as best as possible in **Section 3.14.1** of the FEIS. Development of the leases will create changes in the landscape. As described in **Section 4.14.1.1**, these changes would create minor to major impacts to nearby ceremonial or traditional use sites.

Section 5.15 of the FEIS recognizes that the ability of Native Americans to practice their traditional culture has been reduced through a loss of unoccupied federal lands and degradation of resources in the Cumulative Effects Area. Cumulatively, long-term impacts from the mine expansion would add to other encumbrances on public and USFS managed lands.

Public and tribal access will be temporarily restricted as a standard safety precaution in the active mine areas. The status of the land will remain as unoccupied National Forest System Land. Only a small portion of the mine will be restricted at any one time. The restricted area would not add to the areas currently restricted as a safety precaution, rather they would replace those areas at the existing mine. As areas of the mine expansion are reclaimed and returned to multiple-use, full public and tribal access will be restored. The safety restrictions are temporary and will not continue beyond the estimated mine life. The **Treaty Rights Access** portion of **Section 4.14.1.1** of the FEIS recognizes the agencies' difficulty in quantifying the impact of a temporary loss of a right. The FEIS describes the small area to be affected and the relatively short period of time, but the FEIS also recognizes the Shoshone-Bannock Tribes assertion that this loss of area to implement treaty rights will be significant and could affect all tribal members.

The FEIS discloses that there will be some long-term impacts from the mine operations: approximately 71 acres USFS-approved roads, highwalls, and scarps will remain after reclamation. The topography of those areas will permanently change. As described in **Section 3.14.1**, these impacts will take place in an area in which the tribes have asserted they traditionally have used for hunting, fishing, gathering and other religious ceremonies. These impacts are described as long-term in **Section 4.14.1.1** yet, based on acreage disturbed and impacts to vegetation, they are described as minor. The approximately 71 acres of permanently changed topography and vegetation would be a very small percentage of the remaining unencumbered public lands and the Caribou National Forest and Grasslands. BLM recognizes that in consultation and written communications, including the response to the FEIS, the Shoshone-Bannock Tribes have

stated that these impacts would be permanent impacts to tribal members and will significantly affect their customs, cultural traditions, and treaty rights. Those impacts, which will be permanent and therefore the lands will be unavailable for access and use for the exercise of treaty rights, were considered and determined by the BLM as necessary to meet the purpose and need of the project.

PROJECT COMPLIANCE WITH ESTABLISHED REQUIREMENTS

There are numerous laws and regulations that the mine operations and the FEIS must comply with. **Section 1.2** of the FEIS documents the permits and approvals needed by Simplot. The list of applicable laws below is not exhaustive, yet includes the major applicable laws.

Caribou National Forest Revised Forest Plan 2003

The BLM decisions regarding mining on the National Forest System lands encompassing the Manning and Deer Creek leases are subject to the Caribou National Forest Revised Forest Plan, approved February 2003. The USFS has reviewed the proposed mineral development action and the analysis of predicted impacts. The Mine and Reclamation Plan, as mitigated by the selection of alternatives and with the mitigation described in this Decision and the FEIS, meets the standards and guidelines in the revised Caribou Forest Plan (USDA, CTNF Recommendation letter April 29, 2008). The Mine and Reclamation Plan will provide for long-term multiple-use management on the Caribou-Targhee National Forest.

BLM Pocatello Resource Management Plan

The BLM approval of the Mine and Reclamation Plan is subject to the BLM Pocatello Resource Management Plan approved January 1988. This plan has been reviewed and a determination made that the selected alternatives with mitigation and monitoring conforms to the plan's terms and conditions as required by 43 CFR 1610.5.

Federal Land Policy and Management Act

This decision has been reviewed for compliance with land management agency policies, plans, and programs. This decision is in conformance with the direction for mineral development contained in the Pocatello Resource Management Plan, 1988, and the Caribou National Forest Revised Forest Plan, 2003. The Proposed Action has been mitigated to ensure that unnecessary or undue environmental degradation does not occur. This decision recognizes public lands as an important source of mineral resources and manages within the principles and concepts of multiple-use and Sustainable Development.

National Environmental Policy Act (NEPA)

The Mine and Reclamation Plan has the potential to result in significant effects to the environment. Therefore, in accordance with the provisions of NEPA this decision considers alternatives and mitigation developed to minimize degradation to the environment. The EIS was prepared to make environmental information available to

agency decision makers, other agencies, and the public. Because there are potential impacts to surface water and groundwater, and because of their special expertise, the Idaho Department of Environmental Quality has been engaged as a cooperating agency in the preparation of the EIS.

Mineral Leasing Act
The approved action will allow Simplot to exercise their existing mineral development rights granted in their Federal mineral leases. The selection of alternatives also includes modification of an existing lease which ensures that the ultimate maximum recovery of the mineral deposit can occur. As dictated by the Mineral Leasing Act, Simplot will pay rent and a gross value royalty on phosphate production to the United States.

Mining and Mineral Policy Act
This decision is in harmony with the direction given in the act to foster and encourage private enterprise in development of economically sound and stable domestic mining and minerals industries, and to foster orderly economic development of domestic minerals resources and reclamation of mined lands.

Endangered Species Act
The BLM has coordinated with the U.S. Fish and Wildlife Service as directed by this Act. A Biological Assessment was prepared for the project which states that implementation of this decision with the appropriate mitigation measures "may effect, but is not likely to adversely affect" Canada lynx and bald eagles. The project is expected to meet the requirement of this Act and by memorandum dated April 26, 2007 the U.S. Fish and Wildlife Service has concurred with the Biological Assessment.

National Historic Preservation Act
Section 106 of the National Historic Preservation Act requires the BLM to evaluate potential effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Section 106 process seeks to accommodate historic preservation concerns with federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties. In letters dated April 9, 2004, January 12, 2005, September 29, 2005, and May 5, 2006, the Idaho State Historic Preservation Office (SHPO) conditionally concurred with the mitigation measures and determinations in the FEIS. The FEIS recognizes that there is currently insufficient data regarding two arborglyph sites to determine their eligibility for the National Register of Historic Places and identifies as mitigation that further data regarding these sites be collected per SHPO instruction prior to any disturbance. The Mitigation section of this decision describes the actions that will be taken by Simplot prior to disturbance.

Clean Water Act and Idaho Groundwater Quality Rule
Expected impacts to water quality from this decision and subsequent mining were fully analyzed in the FEIS. Impacts to groundwater and surface water are not expected to

exceed applicable water quality standards in the Clean Water Act and Idaho Groundwater Quality Rules.

Idaho Department of Environmental Quality was a cooperating agency in the preparation of the FEIS. As described in a letter received February 4, 2008, the Idaho Department of Environmental Quality has concurred with the assessment contained in the FEIS. Water quality impacts to surface water and the regional Wells Formation groundwater system from the mitigated mine expansion as described in this decision are not expected to be in violation of either groundwater or surface water quality standards. Seepage from the Panel G chert overburden fill is expected to create manganese concentrations in the Rex Chert aquifer that exceed aesthetic-based groundwater criteria for manganese (**Section 4.3.1.1** of the FEIS). The IDEQ and Simplot have entered into a Consent Order to grant a variance for manganese upon consideration of the following factors: the manganese standard is not a health-based standard; there are no existing uses of the groundwater that will be impacted; and it is unlikely that there will be uses in the future that could be injured by the elevated levels of manganese.

Sage Creek and Deer Creek are both currently listed as Clean Water Act impaired streams; Sage Creek for selenium and Deer Creek for sediment. Both water bodies are supporting beneficial uses. Water quality standards require, for medium and low priority water bodies such as these, that Best Management Practices (BMPs) for non-point sources are employed that will prohibit further impairment. Those BMPs will be in place according to the FEIS and this decision. There are no predicted violations of water quality standards and no predicted changes to the support status of the streams specific to Panels F and G. Therefore, the alternatives selected in this decision are consistent with state Water Quality Standards.

A Section 404, Clean Water Act Permit(s) will be required by the U.S. Department of the Army, Corps of Engineers (USACE) for authorized placement of fill or dredged material in Waters of the U.S or adjacent wetlands. The USACE will render decisions related to that permit and how to mitigate the impacts to affected wetlands and waters of the United States.

As required by the Clean Water Act, the Smoky Canyon Mine operates under an EPA regulated Multi-Sector General Permit, which requires Simplot to develop and implement a Storm Water Pollution Prevention Plan. The EPA's programmatic permitting process expired as of October 30, 2005. However, prior to the expiration, existing permit holders were automatically granted administrative continuance of permit coverage. While it was expected to be updated and approved in 2007, the EPA's Multi-Sector General Permit has not yet been finalized. Until then, Smoky Canyon Mine will continue to operate under their existing approved permit.

Clean Air Act

The Project is expected to meet the requirements of the Clean Air Act. Air emissions from the Mine and Reclamation Plan are regulated by Idaho Department of Environmental Quality and U.S. EPA regulations. Smoky Canyon Mine operates under

an IDEQ permit issued July 6, 1983 (State of Idaho 1983), which addresses the mill boiler, fugitive dust control measures, haul truck speed limits, blasting and drilling dust suppression, and other air pollution control requirements.

Environmental Justice (Executive Order 12898)
This decision will not have disproportionately high and adverse effects on one minority over another or low-income populations under EO 12898.

Migratory Bird Treaty Act
Ground clearing and timber removal are necessary precursors to mineral extraction and are part of this decision. There is potential for the approved action to impact migratory birds. In response to comments on the DEIS by U.S. Fish and Wildlife Service, the BLM engaged in a process with the U.S. Fish and Wildlife Service to determine the appropriate measures to minimize those impacts and incorporated them as mitigation measures in the FEIS. These measures are described in **Section 2.10.1** of the FEIS and in the Mitigation section of this decision. By memorandum dated December 20, 2006, the U.S. Fish and Wildlife Service has concurred with the results of this process.

Public Water Reserve 107 (PWR-107)
PWR-107 was issued by President Calvin Coolidge on April 17, 1926 pursuant to the authority given to the President by Congress by the Act of June 25, 1910 (36 Stat., 847) and known as the Pickett Act. A response to comments in **Section 7.3.3** of the FEIS indicates that under PWR-107 springs are reserved for public use and that under the current land management plans phosphate mining is considered an appropriate and important public use. In addition to that response, the President chose to only reserve springs and waterholes residing on vacant, unappropriated, and unreserved public land, which describes land administered by the BLM. The lands involved in the Panels F & G expansion were withdrawn and reserved by Presidential Proclamation on January 15, 1907 and thereby established the Caribou National Forest Reserve, which describes land administered by the U.S.D.A., Forest Service. PWR-107 is of no consequence with regard to the land or water sources described by the Smoky Canyon Mine expansion.

FINAL AGENCY ACTION

It is my decision to approve the on-lease portions of the Smoky Canyon Mine, Panels F and G, Mine and Reclamation Plan, subject to the environmental protection measures of the Proposed Action, mitigation, monitoring, and conditions developed in the Final Environmental Impact Statement, and as described in this decision record. It is also my decision to grant the lease modification to lease I-27512, subject to a conditional stipulation on the South Lease Modification area which prohibits the lessee from undertaking any mining activities, road construction, and/or surface disturbing activities on the lands until a determination is made regarding whether the RACR applies to the proposed activities, and whether the activities would be allowed or must be modified; in accordance with the terms of the Memorandum of Agreement when finalized. My decision to grant the South Lease Modification will not become effective until the

attached MOA is executed by the lessee and the Bureau of Land Management, Department of Interior.

This decision is the final administrative determination of the Department of Interior and is not subject to appeal (43 CFR part 4.410 (a)(3)).

Julie A Jacobson

June 6, 2008

Julie Jacobson
Deputy Assistant Secretary,
Land and Minerals Management

Date

Figure 1

Selected Alternative Disturbance Map

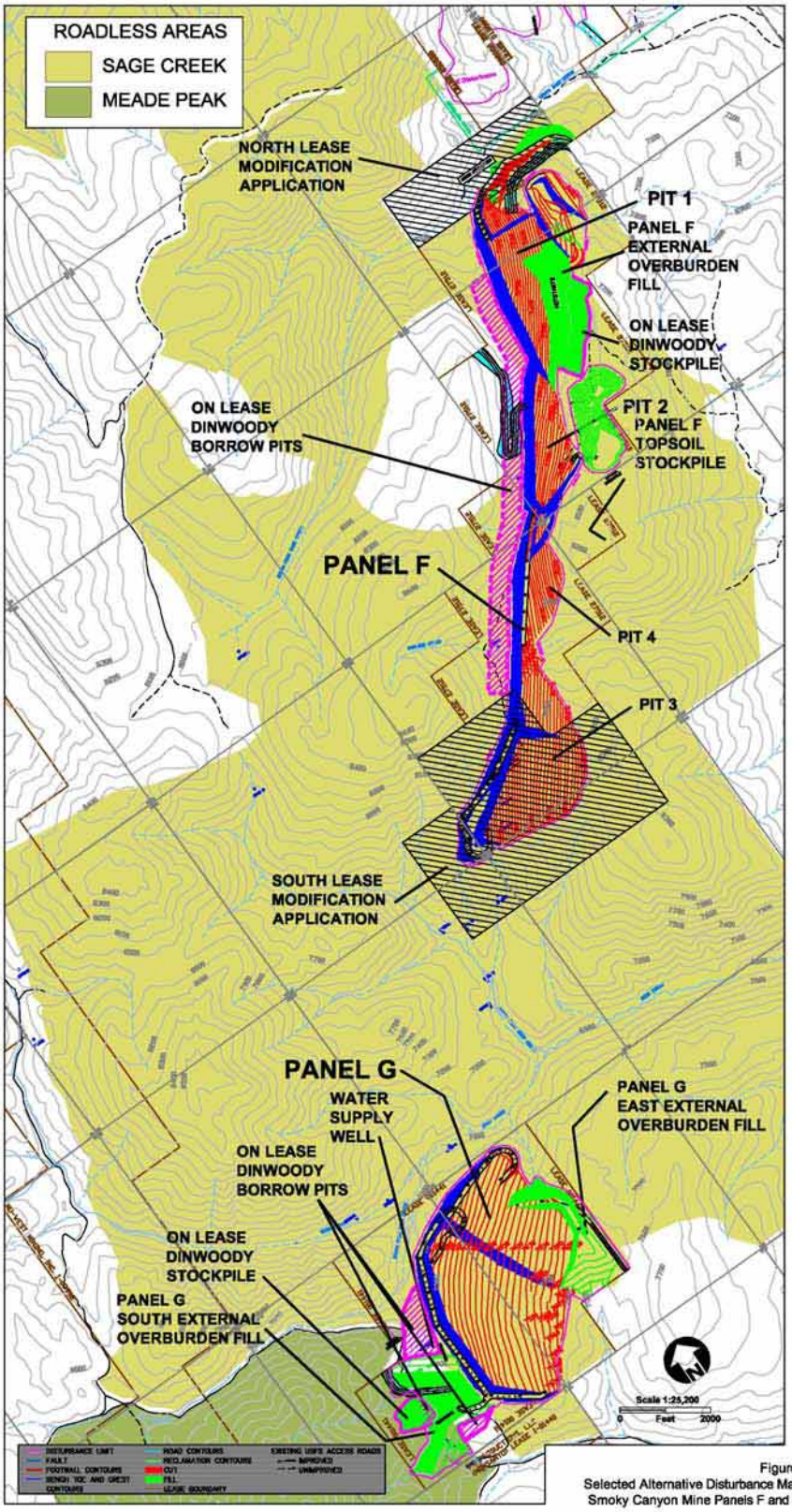

Figure 1
Selected Alternative Disturbance Map
Smoky Canyon Mine Panels F and G

Figure 2

Selected Alternative Disturbance Map including USFS Approval

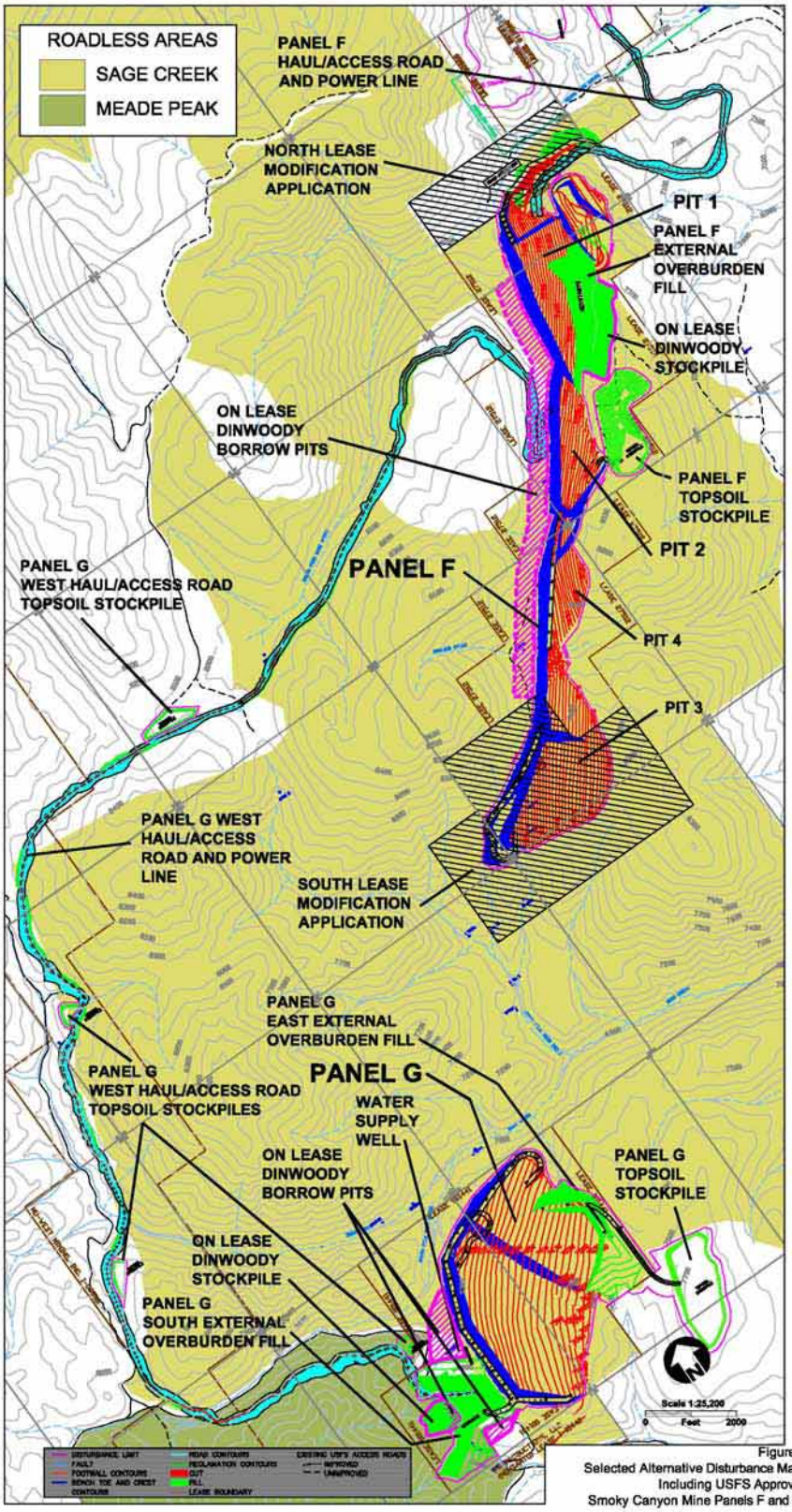

Figure 2
Selected Alternative Disturbance Map
Including USFS Approval
Smoky Canyon Mine Panels F and G

Appendix I

DRAFT Memorandum of Agreement

MEMORANDUM OF AGREEMENT
BETWEEN J.R. SIMPLOT COMPANY, LESSEE
AND THE BUREAU OF LAND MANAGEMENT, LESSOR

RECITALS

A. The J.R. Simplot Company, hereinafter referred to as the lessee, has applied for a lease modification on the following described lands (subject lands), pursuant to the Mineral Leasing Act of 1920, (41 Stat. 37), as amended:

> T. 9 S., R. 45 E., Boise Meridian, Idaho, Sec. 13, N½SE¼, NE¼SW¼ (also referred to as the North Lease Modification area), containing 120 acres; and
>
> T. 9 S., R. 45 E., Boise Meridian, Idaho, Sec. 26, SW¼, SW¼SE¼; Sec. 27, SE¼SE¼; Sec. 34, NE¼NE¼; Sec. 35, N½NW¼, NW¼NE¼ (also referred to as the South Lease Modification area), containing 400 acres.

These lands are included as part of the National Forest System within the Caribou-Targhee National Forest, and lie within an Inventoried Roadless Area (IRA) as defined by regulations of the Secretary of Agriculture at 36 CFR § 294.11.

B. The lessee holds Federal phosphate lease IDI-27512 (hereinafter referred to as the Manning Creek lease). It is this lease that the lessee has sought to modify and which will be modified pursuant to this Memorandum of Agreement and the herein described Environmental Impact Statement and Record of Decision.

C. As set forth in the Record of Decision dated _____, the Bureau of Land Management, hereinafter referred to as BLM, has determined that the subject lands meet the criteria for a lease modification as described at 43 CFR 3510.15.

D. A Final Environmental Impact Statement (FEIS) has been prepared (Smoky Canyon Mine, Panels F & G Final EIS, dated _____) which analyzes the environmental impacts of mining the subject lands and the Manning Creek lease as proposed by the lessee, and several alternatives to the proposed action. The BLM, U.S. Forest Service (hereinafter referred to as the Forest Service), and Idaho Department of Environmental Quality determined that impacts can be adequately mitigated such that the Agency Preferred Alternative (as described in the FEIS), and other monitoring and mitigation measures, is

expected to be in compliance with applicable Federal and State environmental laws and regulations.

E. Mining activity in the South Lease Modification area is not expected to commence until after 2010, according to the mine plan.

F. The lessee and BLM have agreed to enter into this Memorandum of Agreement in order to: modify the terms of the Manning Creek lease to reflect the recommendations of the Forest Service discussed herein; and provide that the public will receive the benefit of the full bonus payment applicable to this lease modification in the event it is determined that mining activities, road construction, and/or surface disturbing activities can be allowed in the South Lease Modification area under the terms of the modified Manning Creek lease.

Now, therefore, lessee and the BLM, by and through their respective authorized representatives, hereby stipulate as follows:

AGREEMENT

I. ROADLESS RULE

A. On January 12, 2001, the Roadless Area Conservation Rule (hereinafter referred to as the Roadless Rule, 66 Fed. Reg. 3244, codified at 36 CFR 294) was promulgated by the United States Department of Agriculture (USDA). The Roadless Rule prohibits road construction and reconstruction and timber harvesting in IRA's with certain enumerated exceptions. The applicability of the Roadless Rule to activities proposed in the South Lease Modification area has not yet been determined, and a determination regarding applicable regulations is not required until lessee requests authorization for mining activity to commence.

B. In a letter to BLM dated February 8, 2007, the Forest Service acknowledged that the existing Manning Creek lease contains a provision that requires the lessee to comply with applicable regulations of the Secretary of Agriculture pertaining to National Forest System lands. This provision would govern both the North and South Lease Modification areas upon modification of the lease. The Forest Service further determined that the proposed activity in the North Lease Modification area is consistent with the Roadless Rule and its exceptions. In the letter, the Forest Service also specifically recommended that the BLM issue the lease modification as to the South Lease Modification area with a contingency that "allows for review and potential modification of activities, if necessary, to comply with the laws and regulations in effect prior to undertaking ground disturbing activities."

C. Given the Forest Service's recommendations, the BLM seeks to add two provisions to the modified Manning Creek lease: one clarifying and addressing the need of the lessee's activities to be consistent with applicable regulations concerning Forest Service roadless

area management, within the modified lease; and one specifically identifying the South Lease Modification area as being subject to a conditional stipulation set forth in Section D., below.

D. The J.R. Simplot Company agrees to the modification of the Manning Creek lease as described above, and agrees to the inclusion of additional terms in the Manning Creek lease (IDI-27512), as set forth below:

> *No mining activities, road construction, and/or surface disturbing activities will be allowed on the lands described below (collectively referred to as the South Lease Modification area) until a determination is made regarding whether the Roadless Area Conservation Rule applies to the proposed activities, and whether the activities are allowed or must be modified:*
>
> > *T. 9 S., R. 45 E., Boise Meridian, Idaho, Sec. 26, SW¼, SW¼SE¼; Sec. 27, SE¼SE¼; Sec. 34, NE¼NE¼; and Sec. 35, N½NW¼, NW¼NE¼.*
>
> *Accordingly, the lessee agrees that prior to undertaking any of these activities on the above described lands, the proposed activities will be subject to further review and may be prohibited or modified by the Federal government if necessary, to comply with applicable regulations.*

II. BONUS BID

A. BLM regulations at 43 CFR 3510.20- Do I have to pay a fee to modify my existing lease?- states "Yes. Before BLM … modifies your existing lease, you must pay a bonus in an amount we will determine based on an appraisal or other appropriate means. The bonus cannot be less than $1 per acre or fraction of an acre."

B. In this case, the BLM has determined that the bonus payment for the lease modification on the subject lands is _____dollars, which includes the North and South Lease Modification areas. This amount is based on an appraisal of the subject land's phosphate and associated and related mineral value.

C. The lands contained in the South Lease Modification area will be subject to the above described stipulation.

D. Lessee agrees to pay the amount of the bonus payment set forth in paragraph IIB (above); provided however, that the portion of the bonus payment relating to the South Lease Modification area will be held in escrow until it is determined whether the activities specified above are allowed. The following provisions will apply to the escrow monies:

1. The lessee will establish an escrow account (the Escrow) with a responsible, neutral escrow agent in (wherever), Idaho.

2. The lessee will, within 30 days of signing this Memorandum of Agreement, pay into the Escrow a sum equal to the bonus payment, in the amount of _____ ($xxxxx.xx). The lessee must pay the cost of establishing and maintaining the Escrow, and pay any taxes due on interest earned.

3. Once the Escrow has been established, and the lessee has paid into the Escrow the sum prescribed by paragraph (2) above, the lessee will prepare and deliver to the BLM a report describing the monies placed in escrow.

4. After BLM is satisfied that the lessee has established and funded an escrow account, BLM will approve the lease modification, subject to the above described stipulation on the South Lease Modification area in Section I. D. of the Agreement between J.R. Simplot Company (Lessee) and the Bureau of Land Management (Lessor).

5. The Escrow agent will be instructed by BLM to invest the escrow monies in one or more appropriate interest-bearing accounts or investments, to the end that these monies will earn interest pending the outcome of the Roadless Rule determination and any administrative or judicial appeals.

6. In the event that the Federal government determines that the lessee is able to exercise lease development activities on the South Lease Modification area, the BLM authorized officer will instruct the Escrow agent to disburse the escrow monies, in the manner set forth in the escrow instructions, to be agreed to by both the lessee and BLM. In general, if these activities are allowed, the escrow monies, including interest, will immediately be disbursed to the BLM and the mine and reclamation plan would be approved. If these activities are not allowed, the lessee agrees to relinquish the South Lease Modification within 90 days of a final decision and the escrow monies, including interest, would be refunded to the lessee.

E. Lessee agrees that, in the event lessee is precluded from exercising lease development activities in the South Lease Modification area in accordance with the terms and conditions of Federal phosphate lease IDI-27512, as modified by this Memorandum of Agreement, or the Federal Government modifies such activities to comply with applicable regulations, lessee will not seek compensation or other damages from the

United States related to the South Lease Modification area other than as provided in paragraph F, below.

F. Lessee has the right at any time to request a relinquishment of the South Lease Modification area. Should relinquishment occur prior to a determination being made regarding such activities in accordance with the stipulation in Section I. D. and as outlined in Section II. D. 6 (above), then the BLM will instruct the escrow agent to have the escrowed monies, including interest earned, returned to lessee.

G. Assignment of the Manning Creek lease to another party will be subject to acceptance of a Memorandum of Agreement with the same terms as this Memorandum of Agreement; and transfer of the escrow, or establishment of a new escrow for this same purpose (valued at the amount of the escrow as of the date of the assignment, including accumulated interest). Upon approval of an assignment by BLM, this Memorandum of Agreement will be terminated.

H. Lessee will be required to pay rental for both the North and South Lease Modification areas, at the same rate as the original lease.

So stipulated this ____ of _____, 2007

J.R. Simplot Co.
P.O. Box 27
Boise, ID 83707

By: /S/
Lawrence S. Hlobik, President

United States Department of the Interior
Bureau of Land Management
Idaho State Office
1387 S. Vinnell Way
Boise, ID 83709

By: /S/
Tom Dyer, State Director

Appendix II

Mitigation and Monitoring

MITIGATION AND MONITORING

The approved Mine and Reclamation Plan contains numerous environmental protection measures described in the FEIS. These measures apply to the alternatives selected by the BLM in this Record of Decision. After reviewing the potential impacts of the project, certain additional mitigation measures are warranted as determined in the FEIS and the recommendation letter from the Caribou-Targhee National Forest. As conditions of approval for the Smoky Canyon Mine, Panels F & G mine expansion, Simplot or the federal lease holder, its employees, contractors, agents, assignees, and operators shall comply with the mitigation and monitoring measures listed below.

Mitigation

- Prior to commencement of ground disturbing activities, Simplot will provide a performance bond for the mine expansion, which will be in addition to the bond already provided for the disturbance at the existing mine. The amount of the bond will include the estimated cost to the government to reclaim the disturbed area of Panels F & G and for the remaining on-lease disturbance at the Smoky Canyon Mine. The bond will include the appropriate administrative costs to complete reclamation and costs to conduct monitoring for the duration Simplot holds the lease. In addition, the bond will include three months projected lease production royalties. BLM will review this bond on a regular basis. If at any time, monitoring data indicate that additional earthwork or remedial action is necessary beyond what is required in the approved plan, the bond will be adjusted to reflect these additional costs.
- Prior to ground disturbance, Simplot will be required to purchase all merchantable timber within the disturbance footprint under USFS direction.
- Simplot will be responsible to acquire and comply with all necessary local, state and federal permits and provide documentation of those permits to BLM. Wetland areas within the study area have been identified in the FEIS. Where disturbed, these areas will be appropriately mitigated by Simplot to the satisfaction of the U.S. Department of Army, Corps of Engineers and/or the state agency with jurisdiction. Simplot will obtain any applicable Clean Water Act permits and certifications for the project.
- Prior to constructing the Panel G East External Overburden Fill, if there has not been an approval for off-lease storage of overburden, Simplot will submit an updated external overburden fill design for agency approval in which all overburden remains on-lease.
- Simplot will provide the Federal land management agencies copies of their plans for conducting research on public lands. Simplot will promptly provide the Federal land management agencies with copies of research collected on public lands.
- Simplot will continue to comply with existing conditions of approval that were attached to the original Smoky Canyon Mine and Reclamation Plan approval and

Record of Decision and all subsequent conditions of approval. The BLM Authorized Officer will provide direction regarding any conflict, if necessary.

Noise

- Simplot will not conduct blasting operations during typical sleeping hours.

Surface Water

- Where haul/access roads are designed close to or over springs, they will either be avoided or Simplot will install culverts, drains, or other mechanisms to ensure natural spring flows continue.
- As described in Section 2.10.1 of the FEIS, disrupted springs, affected either during or after mining operations, within the footprint of the mine disturbance will not be replaced in their original location; rather, alternate, permanent, and generally equivalent water replacement sources, determined on a case-by-case basis, will be located around the mine disturbance footprint, in accordance with RFP requirements. Replacement projects will be designed, constructed, operated and monitored by Simplot with monitoring results submitted to the USFS on a regular basis; designs will be reviewed and dependent on the USFS for approval.
- Regular inspections will be conducted along the outer toes of all overburden fill to identify seeps or spring discharging from the overburden.
- Simplot will conduct infiltration testing within the footprint of external seleniferous overburden fills.
- Roads will be designed, constructed and operated to prevent fuel or oil spills from entering nearby water bodies.

Soil

- Simplot will reduce the loss of soil fertility within the project area by incorporating slash into the salvaged growth medium to increase organic matter content, mixing soil types containing few coarse fragments together with soils containing high coarse fragment content in order to dilute the total coarse fragment percentage, and timing salvage operations to optimize revegetation.
- Prior to seeding, all compacted areas and applied topsoil will be loosened by disking or ripping to a depth of 12 inches to allow unrestricted root growth in the reclamation vegetation.

Vegetation

- Revegetation will proceed no later than the first Fall after a regraded area is covered with topsoil, unless approved by BLM. Herbaceous revegetation will take place as described on pages 2-31 and 2-32 of the FEIS.
- As described in the USFS recommendation letter (USDA, CTNF Recommendation letter April 29, 2008), production of revegetated must be 90 percent of the approved pre-existing conditions/reference area based on pounds of annual production dry weight for three consecutive years.
- Prior to agency release of reclamation vegetation release to multiple-use, reclamation vegetation will be protected through the implementation of institution

controls as described in the USFS recommendation letter (USDA, CTNF Recommendation letter April 29, 2008) and the FEIS.

- Prior to agency release of reclamation vegetation to multiple-use, Simplot will collect sufficient data such that an analysis could determine that the criteria for contaminants in vegetation listed in the Final Area Wide Risk Management Plan, February 2004, or the criteria in place at the time of release would not be exceeded. For example, the Final Area Wide Risk Management Plan identifies 5.0 mg/kg dw selenium as the maximum allowable concentration in vegetation.
- As described in the USFS recommendation letter (USDA, CTNF Recommendation letter April 29, 2008), reforestation will take place according to USFS guidance regarding seed source, transplant source, site preparation, stock types, and planting times, locations, and methods. Only tree species native to the area will be used. This includes aspen, lodgepole pine, Douglas-fir, subalpine fir, and mountain mahogany. Trees from unknown or inappropriate sources will not be permitted. At least half the reforested areas will include aspen. Fertilizing will occur if soil testing indicates conditions are not conducive of tree growth. A minimum of 10 percent of the area classified as having forest cover in Maxim (2004e) that is disturbed will be reforested. Plantings will be well distributed and in areas that are 1 to 10 acres in size. Of the areas planted a minimum of 75percent must have at least 100 healthy live trees per acre that are at least 3 years old to be on trajectory to meet USFS reforestation requirements. Of the areas planted, a minimum of 50 percent must have at least 100 live, healthy trees per acre that are at least 10 years old to meet USFS requirements. Reforested areas will be reviewed by USFS personnel the first, third, and fifth years after planting.
- Unless otherwise approved by USFS, Simplot will use the most genetically adapted plant material for seeding and planting activities and will collect seeds, transplants and roots to propagate reclamation stock to ensure an optimal match between plant materials used and site conditions, thereby increasing the likelihood of revegetation success.
- Simplot will keep records of seed or tree sources, seeding methods, tree planting methods, species used, substrate, date of seeding or planting, etc. and map planting area boundaries with enough detail that they can be easily relocated.
- Simplot will continue their program of monitoring and controlling noxious weed infestations. Simplot will develop a plan for annual noxious weed treatment.

<u>Wildlife</u>

- To minimize the possibility of unintentional take of migratory birds, timber harvest will be scheduled to minimize impacts to bird species by delaying timber harvest as late in the nesting season as possible.
- Prior to timber removal, Simplot will perform surveys for raptor nests and other migratory birds to the maximum extent possible (with emphasis on sensitive species: northern goshawk, flammulated owls, boreal owls, and great gray owls) before the onset of nesting seasons and remove or fell trees containing nests to decrease the likelihood that raptors will return and nest in the harvest areas.
- The ground-clearing process will be completed as late in the nesting season as possible, in a manner to minimize impacts to migratory birds.

- Reclamation vegetation will include, where appropriate, woody species and brush to create islands of vegetative diversity which may attract some migratory bird species back to the area after reclamation.
- Simplot will perform a survey, in the proposed disturbance area in cooperation with USFS wildlife or fisheries biologists to identify western toad populations and any potential habitat to be disturbed, which has not yet been surveyed. If toads were discovered in the surveys, potential mitigations measures will be developed.

Fisheries/Aquatics

As fully described in **Appendix 4B** of the FEIS, a mitigation program to offset impacts to aquatic resources is required and was cooperatively developed in the Yellowstone Cutthroat Trout Biological Evaluation. The six mitigation measures are briefly described as follows:

- Simplot will replace culverts, identified in 2005 by the CTNF as being under capacity or blocking upstream migration of fish, at the FR 102 and FR 111 crossings.
- Simplot will relocate an 8000-foot section of Smoky Canyon Road over the reclaimed Panel C and will narrow a separate 2000-foot section of road where the riparian area (flood plain) occurs.
- As part of a stewardship project related to the timber sale, Simplot will monitor sediment production from FS Road 146 near the Trapper Cabin. Segments of this road that are contributing sediment can be treated through resurfacing, drainage improvements, narrowing away from the stream and/or relocation away from the stream.
- Simplot will assist the Forest Service to replace the muddy ford crossing of Wells Canyon Creek located about 0.1 mile upstream from the Forest boundary.
- Livestock will be excluded from approximately 1 mile of Crow Creek on Forest Service land with the construction of a 4-strand barbed wire or buck and pole fence. Offsite watering will be provided using Crow Creek water to deliver water to five troughs.
- Sedimentation will be reduced on Forest Road 102 from the Trappers Cabin to the Diamond Creek Divide. Segments of this road that are sources of sediment can be treated through a variety of measures- for example resurfacing, improving drainage, or narrowing the road. Funding for this project will be secured by Simplot and implemented by the Forest Service.
- All trees felled within Aquatic Influence Zones will be left whole and on the ground.

Grazing Management

- Livestock will be prevented from grazing, through the construction of fences around reclaimed waste rock areas (backfill and external fills), until the CTNF accepts these areas for grazing management. Fences will be removed by Simplot when accepted for multiple-use.

- Where haul roads cross existing Forest Trails used for driving livestock, trails up and over any road fills or cuts will be constructed by Simplot to allow for safe passage of livestock at these locations.
- In the case of springs that are currently used as water sources for grazing livestock, Simplot will establish mitigation protocols satisfactory to the CNF on a case-by-case basis. Mitigation protocols may involve hauling or pumping water from outside sources until construction of new stock ponds or improvements of nearby springs can be made.

Recreation and Land Use

- As described in Section 4.10.3 of the FEIS, Simplot will post signs along trails at the margins of mining areas informing hikers of the mining activities and potential hazards.
- Where it is determined travel is unsafe, Simplot will post signs that trails are temporarily closed.
- As soon as practicable, Simplot will re-establish trails and mark locations of designated trails through mine disturbance areas.
- During initial mine development of Panel G, Simplot will rebuild Forest Trail 404 connecting the Wells Canyon Road (FR 146) and the Deer Creek Trail 093 a safe distance away from the disturbance limits of Panel G.

Cultural Resources

- Known and eligible sites near existing and proposed mining activities will be avoided by mining activities, where possible, and will be monitored for possible impacts annually by a professionally trained archeologist under supervision of the CTNF.
- Simplot will conduct the research measures to assess site significance of the two unevaluated cultural resource sites, described in Section 4.13.1.1.

Transportation

- Where the haul access roads cut off the existing Forest Routes (FR 179 and FR 740), turnaround areas will be built by Simplot at the temporary termination of the Forest Routes to allow safe and convenient turning of vehicles. At these locations trails for non-motorized access will be built across the haul/access roads to allow safe and convenient crossing.

Monitoring

Simplot currently conducts extensive monitoring at the Smoky Canyon Mine as described and approved in their existing Smoky Canyon Mine Environmental Monitoring Program Plan. Where applicable in a general fashion, these existing monitoring requirements are made a condition of approval for Panels F and G. The monitoring requirements listed below, which are further described in **Appendix 2E** of the FEIS and **Appendix 4B** of the FEIS, are additional conditions of approval requiring monitoring specific to Panels F and G.

- Simplot will supplement the existing Smoky Canyon Mine Environmental Monitoring Program Plan and provide the full plan with the requirements for Panels F and G as described in this decision to BLM and USFS for approval consideration no fewer than **120 days** from Simplot's start of ground disturbing activities. A final version, containing any required revisions, of the updated monitoring plan will be re-submitted **30 days** prior to the start of ground disturbing activities.

Groundwater Monitoring

Modeling results in the FEIS indicate that the BLM-selected mining alternatives will not lead to exceedences of State or Federal groundwater quality standards in the regional Wells Formation ground water system. However, because mine expansion is predicted to effect a small change in water quality, groundwater monitoring is an additional requirement.

- Simplot will update their existing mine-wide monitoring plan (Smoky Canyon Mine Environmental Monitoring Program Plan) to be consistent with the ground water monitoring requirements in **Appendix 2E (pages 1-4)** of the Final EIS.
- Monitoring of groundwater will take place throughout the mining and reclamation of Panels F and G, approximately 16 years, and will continue for another 12 years beyond that. By that time, there will be 12 to 28 years of post-mining results. The BLM and the USFS, in coordination with the IDEQ, will review the monitoring data including the cover performance monitoring to determine the need for or specifications of continued groundwater monitoring.

The purpose of the groundwater monitoring is: (1) early detection of impacts from mining to regional groundwater systems; (2) monitor compliance with current State and Federal water quality standards; (3) measure effectiveness of mitigations to protect groundwater quality; and (4) compare empirical monitoring data collect to predicted model results. A summary of the groundwater monitoring requirements Simplot must implement is provided below:

- At Panel F, groundwater monitoring will include the existing baseline well MC-MW-1 and, at minimum, three additional wells. The new wells will be located on the east side of the mine panel and will be completed in the Wells Formation groundwater flow system. They will be sited at agency-approved locations along northeasterly and easterly flow paths between Panel F and South Fork Sage Creek.
- At Panel G, ground water monitoring will include baseline well DC-MW-5, and, at least, one additional well. The new well(s) will be located on the east side of the mine panel and will be completed in the Wells Formation groundwater flow system. They will be sited at agency-approved locations along northeasterly paths between Panel G and Deer Creek.
- In the event monitoring detects an increase in Contaminants of Potential Concern (COPC) concentration relative to baseline conditions in any monitoring well, responsive actions, outlined in Appendix 2E of the FEIS, will be taken. They

include taking confirmation samples, reviewing COPC concentration data and comparing to baseline data, ongoing evaluations following monitoring events, evaluation of down-gradient transport of overburden constituents to identify and predict long-term effects, and preparation of a Response Plan which proposes additional mitigative measures and continuous effectiveness monitoring.

Surface Water Monitoring

Surface water monitoring is part of Simplot's current environmental monitoring program. Modeling results in the FEIS indicate that the BLM selected mining alternatives will not lead to exceedences of State or Federal surface water quality criteria. However, because mine expansion is predicted to change surface water quality and surface water quality is linked to the protection of numerous resources, surface water monitoring is an additional requirement. New monitoring tasks and sample sites for Panels F and G will be incorporated into Simplot's program. Simplot has also entered into a Consent Order with the IDEQ. That Consent Order also contains monitoring requirements which are consistent with the monitoring described in the FEIS.

- Simplot will update their existing mine-wide monitoring plan (Smoky Canyon Mine Environmental Monitoring Program Plan) to be consistent with the monitoring requirements in **Appendix 2E (pages 4-6)** of the Final EIS and this Record of Decision. If Simplot is unable to acquire or maintain access to the specified sample sites, equivalent sites may be proposed for agency approval.
- Monitoring of surface water will take place throughout the mining and reclamation of Panels F and G, approximately 16 years, and will continue for another 12 years beyond that. At which point there will be 12 to 28 years of post-mining results. The BLM and the USFS, in coordination with the IDEQ, will review the monitoring data including the cover performance monitoring to determine the need for or specifications of continued groundwater monitoring.

The purpose of surface water monitoring is 1) to detect changes in water quality and quantity, 2) demonstrate compliance with the Clean Water Act and Idaho surface water quality standards, 3) compare empirical surface water monitoring data with predicted impact results, and 4) measure effectiveness of mitigations. A summary of surface water quality monitoring which Simplot is required to implement is provided below:

- The surface water monitoring sites listed in **Table 1 of Appendix 2E** will be added to existing water quality monitoring locations.
- Sample collection will take place, at minimum, two times per year; in the spring and fall.
- If data indicate that there is a significant impact from panels F and G mine operations, sampling frequency will increase and if necessary Simplot will take actions which at minimum will include determination of the source of the release and development of preventative and response measures to address the release.
- Simplot will monitor the effectiveness of springs proposed for replacement with alternate water sources in accordance with RFP requirements, and submit its monitoring results to the USFS. The USFS will review monitoring results to

determine if supplemental NEPA analysis and water rights changes are necessary. If long-term monitoring reveals that unacceptable chemistry impacts to springs are occurring, Simplot will be required to either clean up the water chemistry or safely dispose of the contaminated water and replace the lost water with clean water.

- Simplot will monitor for the formation of erosion related rills on the external overburden fills and backfill surfaces. Where necessary, corrective actions will be taken.

Soil

- Monitor the effectiveness of erosion and sedimentation control measures and other soil resource BMPs. Ground cover will be monitored annually using the point-intercept method and the results will be reported to the USFS. Soil cover requirements for bond release are set at levels that will protect the soil from accelerated erosion greater than the tolerance limits of 1 to 2 tons per acre per year. A minimum of 60% ground cover or 85% of pre-existing cover conditions will be met for 3 consecutive years on reclaimed areas. Proportions of vegetation litter and rock should be similar to pre-existing conditions.

Vegetation

- Simplot's production staff will inspect reclaimed areas to ensure appropriate seeding coverage and that seed drilling techniques were used. Inspections will take place annually and will be reported to USFS until reclamation is accepted and bonding is released. If progress is not indicative of potential success, USFS may provide recommendations for improvements.
- Prior to USFS acceptance and bond release, sampling to measure selenium and other COPCs in forage will be conducted in accordance with the USFS guidance. Measurements are required for decisions on range management and the release of mined lands back to multiple use.

Fisheries/Aquatics

Aquatic habitat monitoring will be conducted in accordance with an agency-approved monitoring plan. The monitoring plan includes fish population surveys, aquatic habitat surveys, and selenium concentration inventories.

- Simplot will update their existing mine-wide monitoring plan (Smoky Canyon Mine Environmental Monitoring Program Plan) to be consistent with the Fisheries monitoring requirements in **Appendix 4B** of the FEIS.

A summary of fisheries and aquatic monitoring which Simplot is required to implement is provided below:

Fisheries: Population Monitoring

- Population monitoring will occur in Crow Creek, Spring Creek, Beaver Dam Creek, Sage Creek, South Fork of Sage Creek, Deer Creek, North Fork of Deer Creek and South Fork of Deer Creek.
- Three years of annual baseline population data will be collected, followed by population surveys every three years for at minimum 50 years. After 21 years and again at 30 years sample collection frequency will be reviewed and adjusted if necessary.

Fisheries: Aquatic Habitat Monitoring

- Simplot will fund and conduct aquatic habitat surveys once prior to mining, the year after Panel G is opened, and the year after the reclamation release. Monitoring will consist of both cross-sectional surveys and longitudinal surveys as described in **Appendix 4B**.
- Longitudinal surveys will include Deer Creek, South Fork of Sage Creek, and Wells Canyon Creek.
- Cross-section surveys will occur in Crow Creek, Beaver Dam Creek, Sage Creek, South Fork of Sage Creek, Deer Creek, and North Fork of Deer Creek. The IDEQ Stream Habitat Index will be performed at each cross-section site. Macroinvertebrates will be collected in accordance with IDEQ Beneficial Use Reconnaissance Program protocol.

Contaminant concentrations

- Trends in selenium concentrations within sediment, macroinvertebrates, periphyton, and fish will be monitored every six years with annual baseline surveys conducted over the first three years.
- Sampling locations will be in accordance with **Appendix 4B** and will be located in the following streams: Crow Creek, Beaver Dam Creek, Sage Creek, South Fork of Sage Creek, Deer Creek, and North Fork of Deer Creek.
- If not included in separate monitoring programs, every six years at minimum one redd will be sampled in Crow Creek, Sage Creek, South Fork Sage Creek, Deer Creek, and North Fork Deer Creek to determine percent of deformed juvenile trout.
- BLM reserves the right to require additional sampling to determine contaminant concentration in fish eggs within spawning gravels.
- After 30 years the BLM and USFS will review the monitoring effort and recommend adjustments. The assessment will continue for 50 years unless the Agencies decide to terminate them due to no impacts.

<u>Cultural Resources</u>

- Known and eligible sites near existing and proposed mining activities will be monitored annually for possible impacts by a professionally-trained archaeologist under the supervision of the CNF Forest Archaeologist.
- Simplot will monitor site CB-222 (Trapper's Cabin) to assess the indirect effects of approving the West Haul/Access road in the vicinity of the site.

Store and Release Cover System

BLM selection of Alternative D in this Record of Decision requires Simplot to construct a store and release cover system for the purpose of reducing infiltration into seleniferous overburden material. The ability of the cover to function as designed is sensitive to the physical characteristics of the Dinwoody layers in the cover. **Appendix 2E** of the FEIS describes a two-phased quality control monitoring program and a cover performance monitoring program.

- Simplot will update their existing mine-wide monitoring plan (Smoky Canyon Mine Environmental Monitoring Program Plan) to be consistent with the cover quality control and performance monitoring requirements in **Appendix 2E (pages 9-15)** of the Final EIS.
- Simplot will provide funding to the agencies, through a cost-recovery agreement, to pay for an agency-selected third-party licensed engineer with experience in cover design and QA/QC methods to monitor construction efforts.
- Monitoring of the test cells will continue for the duration of mining and reclamation activities in Panels F and G and for 12 years beyond reclamation. At which point there will be 12 to 28 years of post-mining results. The BLM and the USFS, in coordination with the IDEQ, will review the monitoring data to determine the need for or specifications of continued test cell monitoring.
- Monitoring of the full production cover will continue for the duration of mining and reclamation activities in Panels F and G and for 12 years beyond reclamation. At which point there will be 12 to 28 years of post-mining results. The BLM and the USFS, in coordination with the IDEQ, will review the monitoring data to determine the need for or specifications of continued cover monitoring.

A summary of the cover construction quality control and performance monitoring which Simplot is required to implement is provided below:

Quality Control Phase I

- Simplot will conduct field testing of the Dinwoody material from Panel F by constructing two test plots and employing, at minimum, three construction treatments on each as described in **Appendix 2E** of the FEIS. Each test plot and each treatment layer will be sampled in order to develop the relationship between particle size distribution, in-place density, moisture content, and permeability for each of the treatment techniques. Results will demonstrate the appropriate construction that will produce a cover that will uniformly comply with the cover system design requirements.
- A proposed QA/QC plan, based on data acquired from the test plots, for construction of the production cover will be provided to the agencies for review and approval prior to construction of the Phase II test cover.

Quality Control Phase II

- As described in **Appendix 2E**, in order to demonstrate the feasibility of constructing the Alternative D cover system and to demonstrate the cover system effectiveness, Simplot will construct a large-scale test cover.

- The test cover will be constructed using the QA/QC plan developed from Phase I testing.
- All data obtained from Phase II will be provided to the agencies in a Phase II QA/QC Test Program Report.

Cover Performance Monitoring

- As described in **Appendix 2E**, within the Phase II test cover, Simplot will construct, at minimum, two test cells to collect hydraulic performance data from the as built cover.
- Prior to test cell installation the Agencies will require Simplot to provide design details with a description of their proposed construction.
- As described in Appendix 2E, the test cells will be large-scale lysimeters and cover material properties will be determined including thickness, initial moisture content, particle size distribution, bulk density and hydraulic conductivity. The following parameters will be monitored: meteorological conditions, hydraulic conditions, in situ moisture conditions, in situ temperature conditions, Net percolation, pore-water quality, and vegetative cover conditions.
- Field data on material properties and hydraulic conditions will be use by Simplot to prepare calibration runs of the VADOSE/W model. Model results will be compared to measured results and the difference interpreted. All monitoring data collected will be provided to the agencies on an annual basis.
- Following a number of years of monitoring (estimated 3 to 5 years) all monitoring and modeling data collected to date will be critically evaluated by Simplot in one report comparing the overall hydraulic performance of the test cells with the design studies for the store and release cover. If the variance between the design and monitored performance is significant, additional investigations will be made into the reasons for these variances by Simplot and estimates of the potential, long-term environmental effects of these variances to groundwater and surface water quality will be prepared by Simplot and submitted to the Agencies. If the long-term environmental effects of the variances were considered to be significant, the Agencies and Simplot will determine what changes, if any, are required to the mitigative measures for Panels F and G to maintain compliance with applicable water quality standards.
- A production (Panels F and G) cover performance monitoring program will be provided by Simplot for evaluation and acceptance prior to construction of this cover. In terms of field performance monitoring for a full-scale cover system, the level of monitoring will at least include: meteorological monitoring (i.e. determination of the potential evapotranspiration); site-specific precipitation (including snow survey measurements); cover material moisture storage and hydraulic conductivity changes; watershed or catchment area surface runoff (calculated); vegetation type and cover conditions; erosion observations; in place hydraulic conductivity; and net percolation (calculated).